Steve Wene, No. 019630
MOYES SELLERS & HENDRICKS LTD.
1850 N. Central Avenue, Suite 1100
Phoenix, Arizona 85004
(602)-604-2189
swene@law-msh.com
Attorneys for Ray Water Company, Inc.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
GARY PIERCE, CHAIRMAN
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP
BRENDA BURNS

W-01380A-12-0254

APPLICATION OF RAY WATER COMPANY FOR A PERMANENT INCREASE IN ITS RATES

Docket No. W-01380-12-_____

RATE APPLICATION

Ray Water Company, Inc. ("Company" or "Applicant"), hereby applies for an increase in its water rates.

SUPPORTING DOCUMENTATION

Pursuant to A.A.C. Rule 14-2-103, the Company submits the following documentation in support of the proposed increase in rates and charges:

- Direct Testimony of Sonn S. Rowell (*see* Exhibit 1);
- Required Schedules, Statements, and Documentation (*see* Exhibit 2);
- Water Use Flow Data Sheets (*see* Exhibit 3);

- Plant Descriptions (*see* Exhibit 4);
- Direct Testimony of Matt Rowell (*see* Exhibit 5);
- Monitoring Assistance Program Sampling Fee Invoices (*see* Exhibit 6);
- Department of Environmental Quality compliance report (*see* Exhibit 7); and
- Department of Revenue Certificate of Good Standing (*see* Exhibit 8).

RESPECTFULLY SUBMITTED this 14th day of June, 2012.

MOYES SELLERS & HENDRICKS LTD.

Steve Wene

Steve Wene

Original and 13 copies of the foregoing filed this 14th day of June, 2012, with:

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Donnelly Herbert

EXHIBIT 1

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
GARY PIERCE, CHAIRMAN
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP
BRENDA BURNS

APPLICATION OF RAY WATER COMPANY FOR A PERMANENT INCREASE IN ITS WATER RATES

DIRECT TESTIMONY OF SONN S. ROWELL

Q-1 Please state your name and current employment position:

A-1 My name is Sonn S. Rowell, and I am a Certified Public Accountant and Regulatory Consultant. I am also a managing member of Desert Mountain Analytical Services, PLLC ("DMAS").

Q-2 Describe your educational and professional background:

A-2 I hold a Bachelor of Science Degree in Accounting from Arizona State University, as well as my CPA certification from the Arizona State Board of Accountancy. I have worked for many years in the practice of small business public accounting and regulatory consulting, and have held part-time accountancy teaching positions at Mesa Community College. After employment with the Accounting and Rates Section of the Utilities Division at the Arizona Corporation Commission ("Commission") for four years, I formed DMAS and now specialize primarily in regulatory accounting and consulting.

Q-3 By whom are you employed and in what capacity?

A-3 I have been retained by the management and ownership of Ray Water Company, ("Ray" or "Company") to prepare a Class C rate application for submittal to the Commission.

Q-4 What is the purpose of your testimony?

A-4 The purpose of my testimony is to present my analysis and recommendations concerning the development of Ray's gross revenue requirement, taking into account rate base, adjusted operating income, working capital requirements, current rate of return, required operating income, required rate of return for the historic twelve month period, and other relevant factors to sponsor certain exhibits in support of the rate application.

Q-5 Please summarize the Company's proposal.

A-5 Ray is seeking an increase in gross revenue requirement of approximately $373,970, or a rate increase of approximately 64.90% overall, for its customers to pay for increased operational expenses, expenses related to the new well recently placed into service, and a fair rate of return on the owner's investment.

Q-6 What is the basis for your recommendation?

A-6 I analyzed the Company's records to determine the adjusted revenues and expenses during the test year ending December 31, 2011. Next, I calculated a reasonable revenue requirement in order to ensure the Company can earn sufficient revenue to pay ongoing operating expenses, the debt service on the loan, and ongoing system improvements which will enable the Company to continue to provide adequate and reliable water service to its customers. Based upon my analysis, I have prepared the schedules in accordance with A.A.C. Rule 14-2-103 that are set forth in Application Exhibit 2, which I adopt as part of my testimony.

Q-7 Did the Company adjust test year amounts for plant and other rate base items?

A-7 No.

Q-8 Please identify and explain the adjustments made on Schedule C-1 – Adjusted Test Year Income Statement of this application.

A-8 Adjustment A is comprised of two parts, A1 and A2. Adjustment A1 reduces metered water revenue by $1,134 for bills related to a 4-inch meter commercial customer that has discontinued service. Adjustment A2 reduces Other Water Revenue by $8,708 to

remove Commission and Residential Utility Consumer Office ("RUCO") assessments from revenue, and match actual other revenue in this category. Complete details of these adjustments are depicted on Schedule C-2a.

Q-9 Please explain Adjustment B on Schedule C-2b.

A-9 Adjustment B as delineated on Schedule C-2b calculates the amount of employee retirement contribution that should have been made in 2011, which is $9,070. This annual contribution was not made due to the substantial amount of system improvements and the substantial net loss.

Q-10 Please explain Adjustment C on Schedule C-2c.

A-10 Adjustment C increases Purchased Power by $24,863 over actual test year expense of $82,011. Schedule C-2c illustrates this adjustment reflecting the average of the three main well sites, and adds it to the test year amount. This adjustment is necessary due to the fact that near the end of the test year, Ray put well no. 8 into service, but the expense associated with this well was not reflected throughout the test year.

Q-11 Please explain Adjustments D, E and F.

A-11 Adjustment D on Schedule C-2d reclassifies $10,454 from Miscellaneous Expenses as part of Adjustment I (explained below), which is more appropriate. This adjustment also increases Office Supplies and Expenses by an additional $255 to account for security services not included in the test year. Adjustment E reclassifies a $4,275 ADEQ MAP invoice from Miscellaneous Expenses to Contractual Services – Testing Expenses, as depicted on Schedule C-2e, which is more appropriate. Adjustment F reclassifies $546 from Contract Services – Other to Miscellaneous Expenses for expenses related to blue staking fees.

Q-12 How did you determine the amount of proposed rate case expense?

A-12 The estimate for Adjustment G is detailed on Schedule C-2g, and includes $50,000 of total expense amortized over 5 years, or $10,000 per year. Since test year expenses include $3,000 related to rate case expense, $7,000 must be added to total the appropriate amount of recovery until the next anticipated rate case.

Q-13 Please explain Adjustments H and I.

A-13 Adjustment H reclassifies bad debt expense from Miscellaneous Expenses to Bad Debt Expense for 2011 customer account write-offs. Adjustment I to Miscellaneous Expenses in the net amount of ($13,811) is comprised of many elements discussed throughout this testimony:

- $10,454 was reclassified to Office Supplies and Expenses as Adjustment D.
- $4,275 was reclassified to Contractual Services – Testing as Adjustment E.
- $546 was reclassified from Contractual Services – Other for blue stake fees as Adjustment F.
- $295 was reclassified to Bad Debts Expense as Adjustment H.
- $119 was reclassified to Taxes Other than Income as Adjustment K.
- $1,135 was removed from expense for the ACC assessment paid during 2011, and $205 for the RUCO assessment. As this is a flow through amounts much like sales taxes, the amounts collected as revenue and paid as expense have been removed from the income statement.
- $2,126 was added to this expense to account for the 2011 Annual Winter consumption Report for Pima County Wastewater Management, which was prepared during 2011, but not billed until 2012. As a result, 2012 expenses include the fees for 2011 and 2012, and this adjustment corrects that.

Q-14 Please explain how you calculated Adjustment J to depreciation expense.

A-14 Schedule C-2j begins with plant in service at the end of the test year, and applies depreciation rates normally recommended by Staff, resulting in depreciation expense of $228,582. This amount must be reduced by $48,023 to account for CIAC amortization, resulting in adjusted depreciation expense of $180,559. Since test year depreciation expense was $169,486, this represents an increase of $11,073 over actual test year actual expenses.

Q-15 Please explain Adjustment K on Schedule C-1.

A-15 Adjustment K reclassifies $119 of accrued payroll taxes from Miscellaneous Expenses to Taxes Other Than Income, as depicted on Schedule C-2k.

Q-16 Please explain Adjustments L1 and L2 to property tax expenses as illustrated on Schedule C-2l.

A-16 Adjustment L1 decreases test year property tax expense by $1,671 to $30,589, as a result of the standard ADOR calculation. Adjustment L2 increases proposed property tax expense by $6,612, from the adjusted test year calculated amount of $30,589, to $37,201 at proposed rates.

Q-17 Please explain Adjustment M to Income Tax Expense.

A-17 Schedule C-2m delineates the calculation for adjusted test year income tax expense, based upon the test year adjusted income and a 30% average federal tax rate.

Q-18 What is the purpose of Adjustment N?

A-18 Adjustment N removes below-the-line, non-recurring, non-utility expenses.

Q-19 How did you determine the interest expense Adjustment O?

A-19 As reflected on Schedule C-2o, adjusted test year interest expense is the average of the first five years interest expense related to the loan. Due to the relatively small amount of the loan compared with revenue, using a 5 year average as adjusted test year expense seemed more appropriate than the interest expense related to first year of the loan, which would be 2012. There was no interest paid on the Commission-approved loan during the test year ended December 31, 2011.

Q-20 How was Adjustment P determined?

A-20 Adjustment P increased metered water revenue from the adjusted test year amount of $558,323 by $373,970 to $932,293 for Ray, per the calculation set forth on Schedule A-1.

Q-21 Finally, please explain Adjustment Q.

A-21 Adjustment Q is detailed on Schedule C-2q, and calculates proposed income tax expense based upon the income at a 30% federal tax rate and the 6.968% Arizona tax rate.

Q-22 Please summarize your rate design for Ray.

A-22 The rate design proposed by the Company are more consistent with what is normally approved by the ACC, as Ray is proposing an inverted tier rate design to promote conservation. The rate design proposed by Ray is intended to minimize the impact of the increase to the customers that use small amounts of water.

Q-23 Is this rate design consistent with Commission policy?

A-23 Yes. Ray currently has a single commodity rate. The Company is proposing an inverted tiered rate structure, in which large water use customers will bear the brunt of the requested increase, while low use customers may actually see a decrease.

Q-24 Can you explain the impacts of this rate design further?

A-24 The largest class of users, the 5/8 by ¾ inch residential meters will experience an average increase of 37.28% as depicted on Schedule H-1, Line 1, based on average usage of 7,832 gallons per month. However, a customer that uses 3,000 gallons or less and stays in the first low cost tier, their increase is only $1.75 per month, or 11.08%, as depicted on Schedule H-4, Page 1 of 8.

Q-25 What percent of bills in the Test Year were for 3,000 gallons or less?

A-25 During the test year, there were 3,168 bills for using 3,000 gallons or less, which was 18.17% of the total bills.

Q-26 Why are the tier rates and ranges the same for all classes of customers?

A-26 The large meter sizes pay more in fixed costs every month based on the size of their meter, regardless of usage. In addition, some of the larger sized meters do not have high average usage for the test year, so they may be able to take advantage of the lower tiered rates if they keep usage low. In the case of the 3-inch, 4-inch, and 6-inch meters, which have very high usage, they very quickly move into the highest tier and pay for their usage that way, in addition to a higher monthly minimum. These customer classes

also have the highest amount of increase of all the classes, so it seems they are already paying a substantial increase.

Q-27 Does this conclude your testimony?

A-27 Yes.

EXHIBIT 2

INDEX OF FINANCIAL SCHEDULES FOR RAY WATER COMPANY

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule A-1
Title: Computation of Increase in Gross Revenue Requirements

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Special Reqmt	

Explanation:
Schedule showing computation of increase in gross revenue requirements and spread of revenue increase by customer classification.

Line		Original Cost		RCND	
1	Adjusted Rate Base	$ 1,073,266	(a)		(a)
2	Adjusted Operating Income	$ (125,839)	(b)		(b)
3	Current Rate of Return	-11.72%			
4	Required Operating Income	$ 113,394			
5	Required Rate of Return	10.57%			
6	Operating Income Deficiency (4 - 2)	$ 239,233			
7	Gross Revenue Conversion Factor	1.563	(c)		(c)
8	Increase in Gross Revenue Requirements (6 x 7)	$ 373,970			

	Customer Classification	Adjusted Revenue at Present Rates	Revenue at Proposed Rates	Projected Revenue Increase Due to Rates	% Dollar Increase	
9	Residential	$ 491,575	$ 778,532	$ 286,957	58.38%	(d)
10	Commercial	64,867	148,128	83,261	128.36%	
11	Hydrant	1,881	5,633	3,752	199.47%	
12	Other	17,943	17,943	-	0.00%	
13	**Total**	**$ 576,266**	**$ 950,236**	**$ 373,970**	**64.90%**	

Note: For combination utilities, the above information should be presented in total and by department.

Supporting Schedules:
(a) B-1 (c) C-3
(b) C-1 (d) H-1

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule A-2
Title: Summary Results of Operations

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing comparative operating results for the test year and the 2 fiscal years ended prior to the end of the test year, compared with the projected year.

		Prior Years		Test Year		Projected Year	
		Year End 31-Dec-09	Year End 31-Dec-10	Actual Rates	Adjusted Rates	Present Rates	Proposed Rates
Line	Description	(a)	(a)	(a)	(b)	(c)	(c)
1	Gross Revenues	$ 635,172	$ 599,142	$ 586,108	$ 576,266	$ 576,266	$ 950,236
2	Revenue Deductions & Operating Expenses	(648,127)	(626,850)	(676,610)	(702,105)	(702,105)	(836,843)
3	Operating Income	$ (12,955)	$ (27,708)	$ (90,502)	$ (125,839)	$ (125,839)	$ 113,394
4	Other Income and Deductions	(1,250)	1,155	8	5,040	5,040	5,040
5	Interest Expense	-	-	-	(5,020)	(5,020)	(5,020)
6	**Net Income**	**$ (14,205)**	**$ (26,553)**	**$ (90,494)**	**$ (125,818)**	**$ (125,818)**	**$ 113,414**
7	Earned Per Average Common Share*	$ (88.78)	$ (165.96)	$ (565.59)	$ (786.36)		
8	Dividends Per Common Share*	-	-	-	-		
9	Payout Ratio*	0.00%	0.00%	0.00%	0.00%		
10	Return on Average Invested Capital	-1.21%	-2.31%	-7.92%	-11.01%	-11.01%	9.93%
11	Return on Year End Capital	-1.21%	-2.34%	-7.85%	-10.92%	-10.92%	9.84%
12	Return on Average Common Equity	-1.21%	-2.31%	-8.26%	-11.48%	-11.48%	10.35%
13	Return on Year End Common Equity	-1.21%	-2.34%	-8.54%	-11.87%	-11.87%	10.70%
14	Times Bond Interest Earned - Before Inc Tax	N/A	N/A	N/A	-2393.15%	-2393.15%	2372.85%
15	Times Total Interest and Preferred Dividends						
16	Earned - After Income Taxes	N/A	N/A	N/A	-2506.97%	-2506.97%	2259.04%

Supporting Schedules:
(a) E-2
(b) C-1
(c) F-1

*Optional for projected year

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule A-4
Title: Construction Expenditures and Gross Utility Plant in Service

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing construction expenditures, plant placed in service and gross utility plant in service for the test year and the 2 fiscal years ended prior to the end of the test year, compared with the projected year.

Line	Year	Construction Expenditures (a)	Net Plant Placed In Service (b)	Gross Utility Plant In Service
1	Prior Year 1 - 2009	$ 1,351,039	$ 1,289,348	$ 4,720,689
2	Prior Year 2 - 2010	210,314	76,238	4,796,927
3	Test Year - 2011	319,202	464,138	5,261,065
4	Projected Year 1	42,760	42,760	5,303,825
5	Projected *			
6	Projected *			

* Required only for Class A and B Utilities

NOTE: For combination utilities, above information should be presented in total and by department.

Supporting Schedules:
(a) F-3
(b) E-5

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule B-1
Title: Summary of Original Cost and RCND

Required for:

All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing elements of adjusted original cost and RCND rate bases.

Line	Description	Original Cost Rate Base*		RCND Rate Base*	
1	Gross Utility Plant in Service	$ 5,261,065			
2	Less: Accumulated Depreciation	(1,835,897)			
3	Net Utility Plant in Service	$ 3,425,168	(a)		(b)
4	**Less:**				
5	Advances in Aid of Construction	$ (1,633,387)	(c)		(c)
6	Contributions in Aid of Construction	(982,352)	(c)		(c)
7	**Add:**				
8	Amortization of Contributions	$ 260,433			
9	Allowance for Working Capital	3,404	(d)		(d)
10	**Total Rate Base**	**$ 1,073,266**	(e)		(e)

* Including pro forma adjustments

NOTE: For combination utilities, above information should be presented in total and by department.

Supporting Schedules:
(a) B-2 (d) B-5
(b) N/A
(c) E-1

Recap Schedules:
(e) A-1

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule B-2
Title: Original Cost Rate Base
Proforma Adjustments

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing pro forma adjustments to gross plant in service and accumulated depreciation for the original cost rate base.

Line	Description	Actual at End Of Test Year (a)	Pro forma Adjustment	Adjusted at End Of Test Year (b)
1	Gross Utility Plant in Service	$ 5,261,065		$ 5,261,065
2	Less: Accumulated Depreciation	(1,835,897)		(1,835,897)
3	Net Utility Plant in Service	$ 3,425,168		$ 3,425,168
4	Less:			
5	Advances in Aid of Construction	$ (1,633,387)		$ (1,633,387)
6	Contributions in Aid of Construction	(982,352)		(982,352)
7	Plus:			
8	Amortization of Contributions	$ 260,433		$ 260,433
9	Allowance for Working Capital	3,404		3,404
10	**Total Rate Base**	**$ 1,073,266**		**$ 1,073,266**

All pro forma adjustments should be adequately explained on this schedule or on attachments hereto.

NOTE: For combination utilities, above information should be presented in total and by department.

Supporting Schedules:
(a) E-1

Recap Schedules:
(b) B-1

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule B-5
Title: Computation of Working Capital

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing computation of working capital allowance.

Line	Description	Amount	
1	Cash working capital	$ -	
2	Materials and Supplies Inventories	-	(a)
3	Prepayments	3,404	(a)
4	**Total Working Capital Allowance**	**$ 3,404**	(b)

NOTES:
1. Adequate detail should be provided to determine the bases for the above computations.
2. Adjusted test year operating expenses should be used in computing cash working capital requirements.
3. Combination utilities should compute working capital allowances for each department.

Supporting Schedules:
(a) E-1

Recap Schedules:
(b) B-1

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule C-1
Title: Adjusted Test Year Income Statement

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing statement of income for the test year, including pro forma adjustments.

Line	Acct	Description	Actual for Test Year Ended (a) 31-Dec-11	Ref	Proforma Adjustments (b)	Test Year Results After Pro Forma Adjustments	Ref	Proposed Rate Increase	Adjusted Test Year With Rate Increase
		Operating Revenues:							
1	461	Metered Water Revenue	$ 559,457	A1	$ (1,134)	$ 558,323	P	$ 373,970	$ 932,293
2	460	Unmetered Water Revenue	-			-			-
3	474	Other Water Revenue	26,651	A2	(8,708)	17,943			17,943
4		**Total Operating Revenue**	$ 586,108		$ (9,842)	$ 576,266		$ 373,970	$ 950,236
5		**Operating Expenses:**							
6	601	Salaries and Wages	$ 226,744			$ 226,744			$ 226,744
7	604	Employee Pensions and Benefits	-	B	9,070	9,070			9,070
8	610	Purchased Water	-			-			-
9	615	Purchased Power	82,011	C	24,863	106,874			106,874
10	618	Chemicals	-			-			-
11	620	Materials & Supplies	2,347			2,347			2,347
12	621	Office Supplies and Expense	11,481	D	10,709	22,190			22,190
13	630	Contractual Services - Billing	69,767			69,767			69,767
14	631	Contractual Services - Professional	17,001			17,001			17,001
15	635	Contractual Services - Testing	1,375	E	4,275	5,650			5,650
16	636	Contractual Services - Other	11,459	F	(546)	10,913			10,913
17	640	Rents	22,000			22,000			22,000
18	650	Transportation Expenses	13,316			13,316			13,316
19	655	Insurance	10,590			10,590			10,590
20	665	Rate Case Expense	3,000	G	7,000	10,000			10,000
21	670	Bad Debt Expense	-	H	295	295			295
22	675	Miscellaneous Expenses	23,473	I	(13,811)	9,662			9,662
23	403	Depreciation Expenses	169,486	J	11,073	180,559			180,559
24	408	Taxes Other Than Income	18,527	K	119	18,646			18,646
25	408.11	Property Taxes	32,260	L1	(1,671)	30,589	L2	6,612	37,201
26	409	Income Taxes	(43,940)	M	(25,880)	(69,820)	Q	128,126	58,305
27	427.4	Interest Expense - Customer Deposits	5,713			5,713			5,713
28		**Total Operating Expenses**	$ 676,610		$ 25,495	$ 702,105		$ 134,738	$ 836,843
28		**OPERATING INCOME/(LOSS)**	$ (90,502)		$ (35,337)	$ (125,839)	(c)	$ 239,233	$ 113,394
29		**Other Income/(Expense):**							
30	419	Interest Income	$ 492			$ 492			$ 492
31	421	Non-Utility Income	4,548			4,548			4,548
32	426	Miscellaneous Non-Utility Expenses	(5,032)	N	5,032	-			-
33	427	Interest Expense		O	(5,020)	(5,020)			(5,020)
34		**Total Other Income/(Expense)**	$ 8		$ 12	$ 20		$ -	$ 20
35		**NET INCOME/(LOSS)**	**$ (90,494)**		**$ (35,324)**	**$ (125,818)**		**$ 239,233**	**$ 113,414**

Note: For combination utilities, above information should be presented in total and by department.

Supporting Schedules:
(a) E-2
(b) C-2a to C-2q

Recap Schedules:
(c) A-1

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule C-2a
Title: Income Statement Proforma Adjustments

DETAIL OF ADJUSTMENTS A1 AND A2 TO TEST YEAR REVENUE

Line	Description		Amount
1	Remove revenue related to 4-inch customer no longer on the water system.	$	(1,134)
2	**Total Adjustment A1 to Metered Water Revenue**	**$**	**(1,134)**
3	Annual ACC assessment	$	(1,440)
4	Annual RUCO assessment		(176)
5	Accounts Receivable adjustment		(7,092)
6	**Total Adjustment A2 to Other Water Revenue**	**$**	**(8,708)**
7	Test Year Establishment/Reconnect Fees	$	12,323
8	Test Year Late Fees		3,287
9	Test Year Web Fees		2,010
10	Test Year Other Charges		323
11	Adjusted Test Year Other Water Revenue	$	17,943

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule C-2b
Title: Income Statement Proforma Adjustments

DETAIL OF ADJUSTMENT B TO EMPLOYEE PENSIONS AND BENEFITS

Line	Description		Amount
1	Test Year Salaries and Wages	$	226,744
2	Pension contribution rate		4.00%
3	**Total Adjustment B**	**$**	**9,070**

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule C-2c
Title: Income Statement Proforma Adjustments

DETAIL OF PURCHASED POWER EXPENSES ADJUSTMENT C

Line	Description		Amount
1	4310 East Rex Street well test year purchased power expense	$	31,834
2	4410 East Rex Street well test year purchased power expense		22,485
3	5710 South Rex Street well test year purchased power expense		20,270
4	Three well total test year purchased power expense	$	74,589
5	Average		3
6	Three well average test year purchased power expense	$	24,863
7	Test Year Puchased Power expense	$	82,011
8	Proposed Purcashed Power expense including average amount for three wells as estimated expense for new well #8 (6 + 7)		106,874
9	**Total Adjustment C**	**$**	**24,863**

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule C-2d
Title: Income Statement Proforma Adjustments

DETAIL OF OFFICE SUPPLIES AND EXPENSES ADJUSTMENT D

Line	Description		Amount
1	Reclassify internet payment credits from Miscellaneous Expenses	$	(1,958)
2	Reclassify telephone expenses from Miscellaneous Expenses		5,104
3	Reclassify bank fees and other office related costs from Miscellaneous Expenses		7,308
4	Office alarm service not included in test year		255
5	**Total Adjustment D**	**$**	**10,709**

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule C-2e
Title: Income Statement Proforma Adjustments

DETAIL OF CONTRACTUAL SERVICES-TESTING EXPENSES ADJUSTMENT E

Description		Amount
Reclassify ADEQ MAP invoice from Miscellaneous Expenses	$	4,275
Total Adjustment E	**$**	**4,275**

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Schedule C-2f
Title: Income Statement Proforma Adjustments

DETAIL OF CONTRACTUAL SERVICES-OTHER EXPENSES ADJUSTMENT F

Description		Amount
Reclassify Blue Stake invoice to Miscellaneous Expenses	$	(546)
Total Adjustment F	**$**	**(546)**

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Schedule C-2g
Title: Income Statement Proforma Adjustments

DETAIL OF ADJUSTMENT G TO RATE CASE EXPENSES

Line	Description		Amount
1	Estimated Rate Case Expenses	$	50,000
2	Amortization Period in years		5
3	Annual expense recovery	$	10,000
4	Subtract Actual Test Year Rate Case Expenses		3,000
5	**Total Adjustment G**	**$**	**7,000**

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Schedule C-2h
Title: Income Statement Proforma Adjustments

DETAIL OF ADJUSTMENT H TO BAD DEBT EXPENSES

Description		Amount
Reclassify bad debts expenses from Miscellaneous Expenses	$	295
Total Adjustment H	**$**	**295**

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Schedule C-2i
Title: Income Statement Proforma Adjustments

DETAIL OF MISCELLANEOUS EXPENSES ADJUSTMENT I

Line	Description	Amount	Account Total	Related Adj #
1	Reclassify internet payment credits to Office Supplies and Expenses	$ 1,958		
2	Reclassify telephone expenses to Office Supplies and Expenses	(5,104)		
3	Reclassify bank fees and other office related costs to Office Supplies and Expenses	(7,308)	$ (10,454)	Adj D
4	Reclassify ADEQ MAP invoice to Contractual Services - Testing	(4,275)	(4,275)	Adj E
5	Reclassify Blue Stake invoice from Contractual Services - Other	546	546	Adj F
6	Reclassify to Bad Debts Expenses	(295)	(295)	Adj H
7	Reclassify accrued payroll taxes to Taxes Other Than Income	(119)	(119)	Adj K
8	Remove ACC 2011 assessment amount paid from expense	(1,135)		N/A
9	Remove RUCO 2011 assessment amount paid from expense	(205)		N/A
10	Include amount incurred for preparation of 2011 Annual Winter Consumption Report for Pima County Wastewater Management	2,126		
11	**Total Adjustment I**	**$ (13,811)**		

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Schedule C-2j
Title: Income Statement Proforma Adjustments

DETAIL OF PROPOSED DEPRECIATION EXPENSE CALCULATION - ADJUSTMENT J

Line	Account Number	Description	Plant @ End of Test Year 31-Dec-11	Proposed Depreciation Rate	Ref	Proposed Depreciation Expense
1	301	Intangibles	$ 700	0.00%		$ -
2	303	Land & Land Rights	62,540	0.00%		-
3	304	Structures & Improvements	22,078	3.33%	1	276
4	307	Wells & Springs	1,674,835	3.33%	2	49,737
5	311	Pumping Equipment	873,230	12.50%		109,154
6	320	Water Treatment Equipment	-	20.00%		-
7	320.1	Water Treatment Plants	-	3.33%		-
8	320.2	Solution Chemical Feeders	-	20.00%		-
9	330	Distribution Reservoirs & Standpipes	106,345	2.22%	3	-
10	330.1	Storage Tanks	516,989	2.22%		11,477
11	330.2	Pressure Tanks.	-	5.00%		-
12	331	Transmission & Distribution Mains	1,160,777	2.00%	4	11,622
13	333	Services	526,754	3.33%		17,541
14	334	Meters & Meter Installations	113,643	8.33%		9,466
15	335	Hydrants	105,490	2.00%		2,110
16	339	Other Plant and Misc Equipment	2,902	6.67%		194
17	340	Office Furniture & Equipment	8,901	6.67%		594
18	340.1	Computers and Software	8,967	20.00%		1,793
19	341	Transportation Equipment	72,235	20.00%		14,447
20	343	Tools, Shop, and Garage Equipment	1,932	5.00%		97
21	346	Communication Equipment	1,494	5.00%		75
22	348	Other Tangible Plant	1,253	5.00%	5	-
23		**Totals**	**$ 5,261,065**			**$ 228,582**
24				Test Year Amortization of CIAC		(48,023)
25				Adjusted Depreciation Expense		$ 180,559
26				Test Year Depreciation Expense		169,486
27				**Total Adjustment J**		**$ 11,073**

	Ref	
28	1	$13,781 of the total is fully depreciated.
29	2	$181,238 of the total is fully depreciated.
30	3	The full $106,345 in this category is fully depreciated.
31	4	$579,693 of the total is fully depreciated.
32	5	The total $1,253 is fully depreciated.

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Schedule C-2k
Title: Income Statement Proforma Adjustments

DETAIL OF ADJUSTMENT K TO TAXES OTHER THAN INCOME

Description		Amount
Reclassify accrued payroll taxes from Miscellaneous Expenses	$	119
Total Adjustment K	**$**	**119**

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Schedule C-2l
Title: Income Statement Proforma Adjustments

DETAIL OF PROPERTY TAX EXPENSE ADJUSTMENTS L1 AND L2

Line		Test Year as Adjusted	Company at Proposed Rates
1	Adjusted 2011 Test Year Revenue	$ 576,266	$ 576,266
2	Weight Factor	2	2
3	Subtotal	$ 1,152,532	$ 1,152,532
4	Company Recommended Revenue	576,266	950,236
5	Subtotal	$ 1,728,798	$ 2,102,768
6	Number of Years	3	3
7	Three Year Revenue Average	$ 576,266	$ 700,923
8	AZ Department of Revenue Multiplier	2	2
9	Revenue Base Value	$ 1,152,532	$ 1,401,846
10	Plus 10% of CWIP	830	830
11	Less: Net Book Value of Licensed Vehicles	-	-
12	**Full Cash Value**	**$ 1,153,362**	**$ 1,402,675**
13	Assessment Ratio	20.00%	20.00%
14	**Assessment Value**	**$ 230,672**	**$ 280,535**
15	**Composite Property Tax Rate ***	13.2606%	13.2606%
16	Adjusted Test Year Property Tax Expense	$ 30,589	
17	Actual Test Year Property Tax Expense	32,260	
18	**Total Adjustment L1**	**$ (1,671)**	
19	Projected Property Tax Expense		$ 37,201
20	Adjusted Test Year Property Tax Expense		30,589
21	**Total Adjustment L2**		**$ 6,612**
22	* *Property tax composite rate calculation:*		
23	Assessed Value per 2011 Property Tax Notices	$ 242,022	
24	Property Tax due per 2011 Notices	32,094	
25	Composite Property Tax Rate	13.2606%	
26	*For Gross Revenue Conversion Factor:*		
27	Change in Property Tax Expense	$ 6,612	
28	Change in Revenue Requirement	373,970	
29	Change in Property Tax per Dollar Increase in Revenue	1.7681%	

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Schedule C-2m
Title: Income Statement Proforma Adjustments

CALCULATION OF ADJUSTMENT M TO TEST YEAR INCOME TAX EXPENSES

Line	Description				
1	Operating Income/(Loss) Before Taxes	$ (195,659)			
2	Add Interest Income	492			
3	Less Estimated Interest Expense	(5,020)			
4	Arizona Taxable Income		$ (200,187)		
5	Arizona Income Tax Rate		6.9680%		
6	Arizona Income Tax Expense			$	(13,949)
7	Federal Taxable Income		$ (186,238)		
8	Federal Income Tax Rate		30.0000%		
9	Federal Income Tax Expense				(55,871)
10	Adjusted Test Year Income Tax Expense			$	(69,820)
11	Test Year Income Tax Expense				(43,940)
12	**Total Adjustment M to Income Taxes**			**$**	**(25,880)**

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Schedule C-2n
Title: Income Statement Proforma Adjustments

DETAIL OF ADJUSTMENT N TO NON-UTILITY EXPENSES

Description		Amount
Remove non-recurring expense	$	5,032
Total Adjustment N	**$**	**5,032**

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Schedule C-2o
Title: Income Statement Proforma Adjustments

DETAIL OF INTEREST EXPENSES ADJUSTMENT O

Line	Description		Amount
1	Year 1 loan interest expense	$	6,039
2	Year 2 loan interest expense		5,561
3	Year 3 loan interest expense		5,052
4	Year 4 loan interest expense		4,511
5	Year 5 loan interest expense		3,934
6	Total interest on loan during 5 year period	$	25,098
7	Averaging period in years		5
8	**Total Adjustment O**	**$**	**5,020**

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Schedule C-2p
Title: Income Statement Proforma Adjustments

DETAIL OF ADJUSTMENT P TO PROPOSED METERED WATER REVENUE

Line	Description		Amount
1	Proposed Metered Water Revenue per Schedule A	$	932,293
2	Adjusted Test Year Metered Water Revenue		558,323
3	**Total Adjustment P to Metered Water Revenue**	**$**	**373,970**

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Schedule C-2q
Title: Income Statement Proforma Adjustments

CALCULATION OF ADJUSTMENT Q FOR PROPOSED INCOME TAX EXPENSES

Line				
1	Revenue	$ 950,236		
2	Operating Expenses Excluding Income Tax	(778,537)		
3	Interest Income	492		
4	Estimated Interest Expense	(5,020)		
5	Arizona Taxable Income		$ 167,172	
6	Arizona Income Tax Rate		6.9680%	
7	Arizona Income Tax Expense			$ 11,649
8	Federal Taxable Income		$ 155,523	
9	Federal Tax Rate		30.00%	
10	Total Federal Income Tax Expense			$ 46,657
11	Combined Federal and State Income Tax Expense			$ 58,305
12	Adjusted Test Year Income Tax Expense			(69,820)
13	**Adjustment Q to Proposed Income Tax Expense**			**$ 128,126**
14	Revenue Check:			
15	Required Operating Income	$ 113,394		
16	Adjusted Test Year Operating Income/(Loss)	(125,839)		
17	Proposed Increase In Operating Income		$ 239,233	
18	Income Taxes On Proposed Revenue	$ 58,305		
19	Income Taxes On Test Year Revenue	(69,820)		
20	Proposed Revenue Increase For Income Taxes		$ 128,126	
21	Property Taxes On Proposed Revenue	$ 37,201		
22	Property Taxes On Test Year Revenue	30,589		
23	Proposed Revenue Increase For Property Taxes		$ 6,612	
24	**Total Proposed Increase In Revenue**			**$ 373,970**

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Schedule C-3
Title: Computation of Gross Revenue Conversion Factor

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing incremental taxes on gross revenues and the development of a gross revenue conversion factor.

Line	Description	Rate	Calculation
1	Revenues		1.0000
2	Property Taxes	1.768%	(0.0177)
3	Arizona Taxable Income		0.9823
4	Arizona Income Tax	6.968%	(0.0684)
5	Federal Taxable Income		0.9139
6	Federal Income Tax	30.00%	(0.2742)
7	Operating Income		0.6397
8	**Gross Revenue Conversion Factor (Line 1 / Line 7)**		**1.5632**

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Schedule D-1
Title: Summary Cost of Capital

Explanation:
Schedule showing elements of capital structure and the related cost.

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

		End of Test Year				End of Projected Year			
Line	Invested Capital	Amount	%	Cost Rate (e)	Composite Cost %	Amount	%	Cost Rate (e)	Composite Cost %
1	Long-Term Debt (a)	$ 100,000	8.62%	6.25%	0.54%	$ 84,653	7.40%	6.25%	0.46%
2	Preferred Stock (b)	-				-			
3	Common Equity (c)	1,059,748	91.38%	10.91%	9.97%	1,059,748	92.60%	10.91%	10.10%
4	Deferrals (d)	-				-			
5	Totals	$ 1,159,748	100.00%		10.51%	$ 1,144,401	100.00%		10.57%

Supporting Schedules:
(a) N/A
(b) N/A
(c) N/A
(d) E-1

Recap Schedules:
(e) N/A

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Schedule E-1
Title: Comparative Balance Sheet

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing comparative balance sheets at the end of the test year and the 2 fiscal years ended prior to the test year.

Line	Acct #		Test Year At 31-Dec-11	Prior Year 31-Dec-10	Prior Year 31-Dec-09
		ASSETS			
1		Property, Plant & Equipment: (a)			
2	101	Utility Plant In Service	$ 5,261,065	$ 4,796,927	$ 4,720,689
3	103	Property Held for Future Use			
4	105	Construction Work in Process	8,298	160,604	26,528
5	108	Accumulated Depreciation	(1,835,897)	(1,647,179)	(1,430,896)
6		Total Property Plant & Equipment	$ 3,433,466	$ 3,310,352	$ 3,316,321
7		Current Assts:			
8	131	Cash	$ 10,497	$ 131,380	$ 82,903
9	135	Temporary Cash Investments	66,109	141,617	286,388
10	141	Customer Accounts Receivable	33,285	39,590	24,336
11	146	Notes/Receivables from Associated Companies			
12	151	Plant Material and Supplies			
13	162	Prepayments	3,404	6,455	10,817
14	174	Miscellaneous Current and Accrued Assets	100,789	58,528	28,373
15		Total Current Assets	$ 214,084	$ 377,570	$ 432,817
16		**TOTAL ASSETS**	**$ 3,647,550**	**$ 3,687,922**	**$ 3,749,138**
17		**LIABILITIES and CAPITAL**			
18		Capitalization: (b)			
19	201	Common Stock Issued	$ 16,000	$ 16,000	$ 16,000
20	211	Paid in Capital in Excess of Par Value	41,333	41,333	41,333
21	215	Retained Earnings	1,002,415	1,075,278	1,113,682
22	218	Proprietary Capital	-	-	-
23		Total Capital	$ 1,059,748	$ 1,132,611	$ 1,171,015
24		Current Liabilities:			
25	231	Accounts Payable	$ 17,880	$ -	$ -
26	232	Notes Payable (Current Portion)	7,224	-	-
27	234	Notes/Accounts Payable to Associated Companies		-	-
28	235	Customer Deposits	86,080	100,516	94,600
29	236	Accrued Taxes	24,109	23,608	25,565
30	237	Accrued Interest	4,167	-	-
31	241	Miscellaneous Current and Accrued Liabilities	-	9,064	4,585
32		Total Current Liabilities	$ 139,460	$ 133,188	$ 124,750
33	224	Long-Term Debt (Over 12 Months)	$ 92,776	$ -	$ -
34		Deferred Credits:			
35	252	Advances In Aid Of Construction	$ 1,633,387	$ 1,651,628	$ 1,659,466
36	255	Accumulated Deferred Investment Tax Credits	260	553	959
37	271	Contributions In Aid Of Construction	982,352	982,352	957,335
38	272	Less: Amortization of Contributions	(260,433)	(212,410)	(164,387)
39	281	Accumulated Deferred Income Tax	-	-	
40		Total Deferred Credits	$ 2,355,566	$ 2,422,123	$ 2,453,373
41		Total Liabilities	$ 2,587,802	$ 2,555,311	$ 2,578,123
42		**TOTAL LIABILITIES and CAPITAL**	**$ 3,647,550**	**$ 3,687,922**	**$ 3,749,138**

Supporting Schedules:
(a) E-5

Recap Schedules:
(b) N/A

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Schedule E-2
Title: Comparative Income Statements

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing comparative income statements for the test year and the 2 fiscal years ended prior to the test year.

Line	Acct #		Test Year Ended 31-Dec-11	Prior Year Ended 31-Dec-10	Prior Year Ended 31-Dec-09
		Revenues: (a)			
1	461	Metered Water Revenue	$ 559,457	$ 579,956	$ 592,308
2	460	Unmetered Water Revenue	-		
3	474	Other Water Revenue	26,651	19,186	42,864
4		Total Revenues	$ 586,108	$ 599,142	$ 635,172
5		Operating Expenses (a)			
6	601	Salaries and Wages	$ 226,744	$ 226,621	$ 229,174
7	604	Employee Pensions and Benefits	-	9,064	4,585
8	610	Purchased Water	-	-	-
9	615	Purchased Power	82,011	88,843	89,421
10	618	Chemicals	-		
11	620	Materials & Supplies	2,347	3,522	1,869
12	621	Office Supplies and Expense	11,481	15,126	17,318
13	630	Contractual Services - Billing	69,767		
14	631	Contractual Services - Professional	17,001	38,055	39,407
15	635	Contractual Services - Testing	1,375		
16	636	Contractual Services - Other	11,459		
17	640	Rents	22,000	22,000	22,000
18	650	Transportation Expenses	13,316	9,120	9,465
19	655	Insurance	10,590	17,448	18,982
20	665	Rate Case Expense	3,000	-	
21	670	Bad Debt Expense	-	-	-
22	675	Miscellaneous Expenses	23,473	20,987	24,879
23	403	Depreciation Expenses	169,486	156,411	135,116
24	408	Taxes Other Than Income	18,527	17,991	18,281
25	408.11	Property Taxes	32,260	33,202	35,705
26	409	Income Taxes	(43,940)	(31,936)	1,556
27	427.4	Interest Expense - Customer Deposits	5,713	396	369
28		Total Operating Expenses	$ 676,610	$ 626,850	$ 648,127
28		**OPERATING INCOME/(LOSS)**	**$ (90,502)**	**$ (27,708)**	**$ (12,955)**
29		Other Income/(Expense)			
30	419	Interest and Dividend Income	$ 492	$ 2,252	$ 2,200
31	421	Non-Utility Income	4,548	-	(3,200)
32	426	Miscellaneous Non-Utility Expense	(5,032)	(1,097)	(250)
33	427	Interest Expense	-	-	-
34		Total Other Income/(Expense)	$ 8	$ 1,155	$ (1,250)
35		**NET INCOME/(LOSS)**	**$ (90,494)**	**$ (26,553)**	**$ (14,205)**

Supporting Schedules:
(a) N/A

Recap Schedules:
A-2

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Schedule E-5
Title: Detail of Utility Plant

Required for:

All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing utility plant balance, by detailed account number, at the end of the test year and the end of the prior fiscal year.

Line	Account Number	Description	End of Prior Year at 31-Dec-10	Net Additions	End of Test Year at 31-Dec-11
1	302	Franchises	$ 700		$ 700
2	303	Land & Land Rights	62,540		62,540
3	304	Structures & Improvements	15,868	6,210	22,078
4	307	Wells & Springs	1,401,600	273,235	1,674,835
5	311	Pumping Equipment	712,466	160,764	873,230
6	320	Water Treatment Equipment	-		-
7	320.1	Water Treatment Plants	-		-
8	320.2	Solution Chemical Feeders	-		-
9	330	Distribution Reservoirs & Standpipes	106,345		106,345
10	330.1	Storage Tanks	516,989		516,989
11	330.2	Pressure Tanks.	-		-
12	331	Transmission &Distribution Mains	1,139,554	21,223	1,160,777
13	333	Services	526,281	473	526,754
14	334	Meters & Meter Installations	112,671	972	113,643
15	335	Hydrants	105,490		105,490
16	339	Other Plant and Misc Equipment	2,902		2,902
17	340	Office Furniture & Equipment	8,901		8,901
18	340.1	Computers and Software	8,967		8,967
19	341	Transportation Equipment	72,235		72,235
20	343	Tools, Shop, and Garage Equipment	671	1,261	1,932
21	346	Communications Equipment	1,494		1,494
22	348	Other Tangible Plant	1,253		1,253
23		**Total Plant In Service**	**$ 4,796,927**	**$ 464,138**	**$ 5,261,065**
24	108	Accumulated Depreciation	(1,647,179)	(188,718)	(1,835,897)
25		Net Plant In Service	$ 3,149,748	$ 275,420	$ 3,425,168
26	103	Property Held for Future Use	-	-	-
27	105	Construction Work in Process	160,604	(152,306)	8,298
28		**Total Net Plant**	**$ 3,310,352**	**$ 123,114**	**$ 3,433,466**

Supporting Schedules:

Recap Schedules:
E-1 A-4

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Schedule E-7
Title: Operating Statistics

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing key operating statistics in comparative format, for the test year and the 2 fiscal years ended prior to the test year.

Line	**Water Statistics:**	**Test Year Ended 31-Dec-11**	**Prior Year Ended 31-Dec-10**	**Prior Year Ended 31-Dec-09**
1	Gallons Sold - By Class of Service:			
2	Residential	180,262,689	201,277,469	205,138,238
3	Commercial	28,391,223	31,709,531	32,317,762
4	Average Number of Customers - By Class of Service:			
5	Residential	1,473	1,473	1,485
6	Commercial	38	38	38
7	Average Annual Gallons Per Residential Customer	122,357	136,621	138,161
8	Average Annual Revenue Per Residential Customer	$ 323.45	$ 345.56	$ 347.95
9	Pumping Cost Per 1,000 Gallons	$ 0.3930	$ 0.3813	$ 0.3766

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Schedule E-8
Title: Taxes Charged to Operations

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule showing all significant taxes charged to operations for the test year and the 2 fiscal years ended prior to the test year.

Line	Description	Test Year Ended 31-Dec-11	Prior Year Ended 31-Dec-10	Prior Year Ended 31-Dec-09
1	Federal Taxes:			
2	Income	$ (30,083)	$ (21,934)	$ (526)
3	Payroll	17,820	17,929	18,124
4	Total Federal Taxes	$ (12,263)	$ (4,005)	$ 17,598
5	State Taxes:			
6	Income	$ (13,857)	$ (10,002)	$ 2,082
7	Payroll	157	62	157
8	Total State Taxes	$ (13,700)	$ (9,940)	$ 2,239
9	Local Taxes:			
10	Property	$ 32,260	$ 33,202	$ 35,705
11	Rental Tax	550	-	-
12	Total Local Taxes	32,810	33,202	35,705
13	**Total Taxes**	**$ 6,847**	**$ 19,257**	**$ 55,542**

NOTE: For combination utilities, the above should be presented in total and by department.

Supporting Schedules:

Recap Schedules:

Ray Water Company
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Schedule E-9
Title: Notes to Financial Statements

Required for:		
	All Utilities	X
	Class A	
	Class B	
	Class C	
	Class D	
	Specl Reqmt	

Explanation:
Disclosure of important facts pertaining to the understanding of the financial statements.

Disclosures should include, but not be limited to the following:

1 Accounting Method.
Accrual basis using the NARUC USoA.

2 Depreciation lives and methods employed by major classification of utility property.
For years up to and including the test year 2011, the depreciation rate was 5% for all plant asset categories. Proposed depreciation rates are depicted on Schedule C-2j, and were taken from ACC Engineering Staff Memo regarding their recommended rates for depreciation.

3 Income tax treatment - normalization or flow through.
Normalization.

4 Interest rate used to charge interest during construction, if applicable.
Not Applicable.

Supporting Schedules:

Recap Schedules:

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Test Year Ended December 31, 2011

Schedule F-1
Title: Projected Income Statements - Present and Proposed Rates

Explanation:
Schedule showing an income statement for the projected year, compared with actual test year results, at present and proposed rates.

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Line			Actual Test Year Ended (a) 31-Dec-11	Projected Year At Present Rates Year Ended (b) 31-Dec-12	Projected Year At Proposed Rates Year Ended (b) 31-Dec-12
		Operating Revenues:			
1	461	Metered Water Revenue	$ 559,457	$ 558,323	$ 932,293
2	460	Unmetered Water Revenue	-	-	-
3	474	Other Water Revenue	26,651	17,943	17,943
4		**Total Operating Revenue**	$ 586,108	$ 576,266	$ 950,236
5		**Operating Expenses:**			
6	601	Salaries and Wages	$ 226,744	$ 226,744	$ 226,744
7	604	Employee Pensions and Benefits	-	9,070	9,070
8	610	Purchased Water	-	-	-
9	615	Purchased Power	82,011	106,874	106,874
10	618	Chemicals	-	-	-
11	620	Materials & Supplies	2,347	2,347	2,347
12	621	Office Supplies and Expense	11,481	22,190	22,190
13	630	Contractual Services - Billing	69,767	69,767	69,767
14	631	Contractual Services - Professional	17,001	17,001	17,001
15	635	Contractual Services - Testing	1,375	5,650	5,650
16	636	Contractual Services - Other	11,459	10,913	10,913
17	640	Rents	22,000	22,000	22,000
18	650	Transportation Expenses	13,316	13,316	13,316
19	655	Insurance	10,590	10,590	10,590
20	665	Rate Case Expense	3,000	10,000	10,000
21	670	Bad Debt Expense	-	295	295
22	675	Miscellaneous Expenses	23,473	9,662	9,662
23	403	Depreciation Expenses	169,486	180,559	180,559
24	408	Taxes Other Than Income	18,527	18,646	18,646
25	408.1	Property Taxes	32,260	30,589	37,201
26	409	Income Taxes	(43,940)	(69,820)	58,305
27	427.4	Interest Expense - Customer Deposits	5,713	5,713	5,713
28		**Total Operating Expenses**	$ 676,610	$ 702,105	$ 836,843
28		**OPERATING INCOME/(LOSS)**	$ (90,502)	$ (125,839)	$ 113,394
29		**Other Income/(Expense):**			
30	419	Interest Income	$ 492	$ 492	$ 492
31	421	Non-Utility Income	4,548	4,548	4,548
32	426	Miscellaneous Non-Utility Expenses	(5,032)	-	-
33	427	Interest Expense	-	(5,020)	(5,020)
34		**Total Other Income/(Expense)**	$ 8	$ 20	$ 20
35		**NET INCOME/(LOSS)**	**$ (90,494)**	**$ (125,818)**	**$ 113,414**
36		Earnings per share of average Common Stock Outstanding	$ (566)	$ (786)	$ 709
37		% Return on Common Equity	-0.053%	-0.074%	0.067%

Supporting Schedules:
(a) E-2

Recap Schedules:
(b) A-2

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule F-3
Title: Projected Construction Requirements

Explanation:
Schedule showing projected annual construction requirements, by property classification, for 1 to 3 years subsequent to the test year compared with the test year.

Required for:		
All Utilities		
Class A	X	3 yrs projected
Class B	X	
Class C	X	1 yrs projected
Class D	X	
Specl Reqmt		

Line	Property Classification	Actual Test Year Ended 12/31/2011	End of Projected Year 1
1	Production Plant	$ 433,999	$ 17,360
2	Transmission Plant	21,696	23,000
3	Other Plant	8,443	2,400
4	**Total Plant**	**$ 464,138**	**$ 42,760**

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule F-4
Title: Assumptions Used in Developing Projection

Required for:	
	All Utilities [X]
	Class A [ ]
	Class B [ ]
	Class C [ ]
	Class D [ ]
	Specl Reqmt [ ]

Explanation:
Documentation of important assumptions used in preparing forecasts and projections

Important assumptions used in preparing projections should be explained.

Areas covered should include:

1 Customer growth
As the system is nearly built out, no significant growth is expected in the service area in the future.

2 Growth in consumption and customer demand

Consumer demand has declined each year for the past three years, and the Company anticipates further decreases in customer consumption and demand as a result of the proposed tiered rate structure.

3 Changes in expenses

The Company believes the 2011 Test Year, with the proforma adjustments included in this application, accurately depict expense levels for the utility going forward.

4 Construction requirements including production reserves and changes in plant capacity
None projected.

5 Capital structure changes
None projected.

6 Financing costs, interest rates
The Company has one loan that was approved by the Commission at an interest rate of 6.25%

Supporting Schedules:

Recap Schedules:

INDEX OF BILL COUNT SCHEDULES FOR RAY WATER COMPANY

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule H-1
Title: Summary of Revenues by Customer Classification - Present and Proposed Rates

Required for: All Utilities [X]
Class A [ ]
Class B [ ]
Class C [ ]
Class D [ ]
Specl Reqmt [ ]

Explanation:
Schedule comparing revenues by customer classification for the Test Year, at present and proposed rates.

Line	Customer Classification	Revenues in the Test Year (a) Present Rates	Adjustments	Adjusted Present Rates	Proposed Increase (b) Proposed Rates	Amount	%
	Residential						
1	5/8 by 3/4-inch	$ 404,695		$ 404,695	$ 555,567	$ 150,872	37.28%
2	1-inch	12,343		12,343	23,426	11,083	89.79%
3	1 1/2-inch	2,332		2,332	3,676	1,344	57.63%
4	2-inch	12,402		12,402	22,241	9,839	79.33%
5	4-inch	59,803		59,803	173,622	113,819	190.32%
6	*Total Residential*	$ 491,575	$ -	$ 491,575	$ 778,532	$ 286,957	58.38%
	Commercial						
7	5/8 by 3/4-inch	$ 10,853		$ 10,853	$ 27,448	$ 16,595	152.91%
8	1-inch	11,691		11,691	14,457	2,766	23.66%
9	1 1/2-inch	760		760	909	149	19.61%
10	2-inch	7,736		7,736	9,626	1,890	24.43%
11	3-inch	12,051		12,051	33,921	21,870	181.48%
12	4-inch	1,134	(1,134)	-	-	-	0.00%
13	6-inch	21,776		21,776	61,767	39,991	183.65%
14	*Total Commercial*	$ 66,001	$ (1,134)	$ 64,867	$ 148,128	$ 83,261	128.36%
15	Hydrant Sales	1,881		1,881	$ 5,633	3,752	199.47%
16	Total Metered Water Revenue	$ 559,457	$ (1,134)	$ 558,323	$ 932,293	373,970	66.98%
17	Other Revenue	26,651	(8,708)	17,943	17,943	-	0.00%
18	***Total Revenue***	**$ 586,108**	**$ (9,842)**	**$ 576,266**	**$ 950,236**	**$ 373,970**	64.90%

Note: For combination utilities, above information should be presented in total and by department.

Supporting Schedules:
(a) N/A

Recap Schedules:
(b) A-1

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule H-3
Title: Changes in Representative Rate Schedules - Page 1 of 2

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule comparing present rate schedules with proposed rate schedule.

(Rates apply to both residential and commercial usage)

Description	Present Rate	Proposed Rate	% change
MONTHLY USAGE CHARGE:			
5/8" x 3/4" Meter	$ 11.15	$ 15.00	34.53%
3/4" Meter	25.00	25.00	0.00%
1" Meter	39.00	39.00	0.00%
1-1/2" Meter	62.00	75.00	20.97%
2" Meter	110.00	120.00	9.09%
3" Meter	125.00	240.00	92.00%
4" Meter	165.00	375.00	127.27%
6" Meter	330.00	750.00	127.27%

Description	Present Rate	Proposed Rate	
COMMODITY CHARGES - Per 1,000 Gallons			
All Meter Sizes			
1 - 3,000 Gallons	$ 1.55	$ 0.85	-45.16%
3,001 to 7,000 Gallons	1.55	2.25	45.16%
7,001 to 25,000 Gallons	1.55	3.35	116.13%
Over 25,000 Gallons	1.55	4.64	199.35%
Standpipe sales			
Per 1,000 gallons	$ 1.55	$ 4.64	199.35%

Description	Present Rate	Proposed Rate	% change
SERVICE CHARGES			
Establishment	$ 25.00	$ 30.00	20.00%
Establishment (After Hours)	37.50	N/A	
Reconnection (Delinquent)	25.00	35.00	40.00%
Meter Test (If Correct)	30.00	35.00	16.67%
Deposit	*	*	0.00%
Deposit Interest	*	*	0.00%
Reestablishment (Within 12 Months)	**	**	0.00%
NSF Check	$ 15.00	$ 25.00	66.67%
Deferred Payment	***	***	0.00%
Meter Re-read (If Correct)	$ 15.00	$ 30.00	100.00%
Late Payment Fee	***	2.00%	
After Hours Charge	N/A	$ 25.00	

* Per A.A.C. R14-2-403(B)
** Months off system times the minimum (R14-2-403.D)
*** 1.50 percent per month of unpaid balance

SERVICE LINE AND METER INSTALLATION CHARGES:

Refundable Pursuant to A.A.C. R14-2-405		Proposed Rates			
Description	**Present Rate**	**Service Line**	**Meter Charge**	**Total Charge**	**% change**
5/8" x 3/4" Meter	$ 410.00	$ 445.00	$ 155.00	$ 600.00	46.34%
3/4" Meter	455.00	445.00	255.00	700.00	53.85%
1" Meter	520.00	495.00	315.00	810.00	55.77%
1-1/2" Meter	740.00	550.00	525.00	1,075.00	45.27%
2" Meter - Turbine	1,235.00	830.00	1,045.00	1,875.00	51.82%
2" Meter - Compound	1,800.00	830.00	1,890.00	2,720.00	51.11%
3" Meter - Turbine	1,705.00	1,045.00	1,670.00	2,715.00	59.24%
3" Meter - Compound	2,340.00	1,165.00	2,545.00	3,710.00	58.55%
4" Meter - Turbine	2,700.00	1,490.00	2,670.00	4,160.00	54.07%
4" Meter - Compound	3,405.00	1,670.00	3,645.00	5,315.00	56.09%
6" Meter - Turbine	5,035.00	2,210.00	5,025.00	7,235.00	43.69%
6" Meter - Compound	6,510.00	2,330.00	6,920.00	9,250.00	42.09%
8" Meter	Cost			Cost	0.00%

NOTES:

A - Additional costs associated with service line installations in major traffic thoroughfares, such as but not limited to, underground borings, cutting and repaving, and traffic control, may be added to the above tariff at actual cost.

B - Major thoroughfares are as follows: Alvernon Way, Drexal Road, Benson Highway, Irvington Road, Palo Verde, Valencia, Country Club, Columbus, East Side of Belvedere, Felix, Nebraska between Palo Verde and Madison, Northeast side of Concord Strav.

C - Charges for meters and service lines larger than 6 inches shall be at actual cost.

Supporting Schedules:

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule H-4
Title: Typical Bill Analysis

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

5/8 x 3/4-inch Meter (Residential and Commercial)

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ 11.15	$ 15.00	34.53%
1,000	12.70	15.85	24.80%
2,000	14.25	16.70	17.19%
3,000	15.80	17.55	11.08%
4,000	17.35	19.80	14.12%
5,000	18.90	22.05	16.67%
6,000	20.45	24.30	18.83%
7,000	22.00	26.55	20.68%
8,000	23.55	29.90	26.96%
9,000	25.10	33.25	32.47%
10,000	26.65	36.60	37.34%
15,000	34.40	53.35	55.09%
20,000	42.15	70.10	66.31%
25,000	49.90	86.85	74.05%
50,000	88.65	202.85	128.82%
75,000	127.40	318.85	150.27%
100,000	166.15	434.85	161.72%
125,000	204.90	550.85	168.84%
150,000	243.65	666.85	173.69%
175,000	282.40	782.85	177.21%
200,000	321.15	898.85	179.88%

Supporting Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

1-inch Meter (Residential and Commercial)

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ 39.00	$ 39.00	0.00%
1,000	40.55	39.85	-1.73%
2,000	42.10	40.70	-3.33%
3,000	43.65	41.55	-4.81%
4,000	45.20	43.80	-3.10%
5,000	46.75	46.05	-1.50%
6,000	48.30	48.30	0.00%
7,000	49.85	50.55	1.40%
8,000	51.40	53.90	4.86%
9,000	52.95	57.25	8.12%
10,000	54.50	60.60	11.19%
15,000	62.25	77.35	24.26%
20,000	70.00	94.10	34.43%
25,000	77.75	110.85	42.57%
50,000	116.50	226.85	94.72%
75,000	155.25	342.85	120.84%
100,000	194.00	458.85	136.52%
125,000	232.75	574.85	146.98%
150,000	271.50	690.85	154.46%
175,000	310.25	806.85	160.06%
200,000	349.00	922.85	164.43%

Supporting Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

1 1/2-inch Meter (Residential and Commercial)

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ 62.00	$ 75.00	20.97%
1,000	63.55	75.85	19.35%
2,000	65.10	76.70	17.82%
3,000	66.65	77.55	16.35%
4,000	68.20	79.80	17.01%
5,000	69.75	82.05	17.63%
6,000	71.30	84.30	18.23%
7,000	72.85	86.55	18.81%
8,000	74.40	89.90	20.83%
9,000	75.95	93.25	22.78%
10,000	77.50	96.60	24.65%
15,000	85.25	113.35	32.96%
20,000	93.00	130.10	39.89%
25,000	100.75	146.85	45.76%
50,000	139.50	262.85	88.42%
75,000	178.25	378.85	112.54%
100,000	217.00	494.85	128.04%
125,000	255.75	610.85	138.85%
150,000	294.50	726.85	146.81%
175,000	333.25	842.85	152.92%
200,000	372.00	958.85	157.76%

Supporting Schedules:

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

2-Inch Meter (Residential and Commercial)

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ 110.00	$ 120.00	9.09%
1,000	111.55	120.85	8.34%
2,000	113.10	121.70	7.60%
3,000	114.65	122.55	6.89%
4,000	116.20	124.80	7.40%
5,000	117.75	127.05	7.90%
6,000	119.30	129.30	8.38%
7,000	120.85	131.55	8.85%
8,000	122.40	134.90	10.21%
9,000	123.95	138.25	11.54%
10,000	125.50	141.60	12.83%
15,000	133.25	158.35	18.84%
20,000	141.00	175.10	24.18%
25,000	148.75	191.85	28.97%
50,000	187.50	307.85	64.19%
75,000	226.25	423.85	87.34%
100,000	265.00	539.85	103.72%
125,000	303.75	655.85	115.92%
150,000	342.50	771.85	125.36%
175,000	381.25	887.85	132.88%
200,000	420.00	1,003.85	139.01%

Supporting Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

3-inch Meter (Commercial)

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ 125.00	$ 240.00	92.00%
1,000	126.55	240.85	90.32%
2,000	128.10	241.70	88.68%
3,000	129.65	242.55	87.08%
4,000	131.20	244.80	86.59%
5,000	132.75	247.05	86.10%
6,000	134.30	249.30	85.63%
7,000	135.85	251.55	85.17%
8,000	137.40	254.90	85.52%
9,000	138.95	258.25	85.86%
10,000	140.50	261.60	86.19%
15,000	148.25	278.35	87.76%
20,000	156.00	295.10	89.17%
25,000	163.75	311.85	90.44%
50,000	202.50	427.85	111.28%
75,000	241.25	543.85	125.43%
100,000	280.00	659.85	135.66%
125,000	318.75	775.85	143.40%
150,000	357.50	891.85	149.47%
175,000	396.25	1,007.85	154.35%
200,000	435.00	1,123.85	158.36%

Supporting Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

4-inch Meter (Residential and Commercial)

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ 165.00	$ 375.00	127.27%
1,000	166.55	375.85	125.67%
2,000	168.10	376.70	124.09%
3,000	169.65	377.55	122.55%
4,000	171.20	379.80	121.85%
5,000	172.75	382.05	121.16%
6,000	174.30	384.30	120.48%
7,000	175.85	386.55	119.82%
8,000	177.40	389.90	119.79%
9,000	178.95	393.25	119.75%
10,000	180.50	396.60	119.72%
15,000	188.25	413.35	119.58%
20,000	196.00	430.10	119.44%
25,000	203.75	446.85	119.31%
50,000	242.50	562.85	132.10%
75,000	281.25	678.85	141.37%
100,000	320.00	794.85	148.39%
125,000	358.75	910.85	153.90%
150,000	397.50	1,026.85	158.33%
175,000	436.25	1,142.85	161.97%
200,000	475.00	1,258.85	165.02%

Supporting Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

6-inch Meter (Commercial)

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ 330.00	$ 750.00	127.27%
1,000	331.55	750.85	126.47%
2,000	333.10	751.70	125.67%
3,000	334.65	752.55	124.88%
4,000	336.20	754.80	124.51%
5,000	337.75	757.05	124.15%
6,000	339.30	759.30	123.78%
7,000	340.85	761.55	123.43%
8,000	342.40	764.90	123.39%
9,000	343.95	768.25	123.36%
10,000	345.50	771.60	123.33%
15,000	353.25	788.35	123.17%
20,000	361.00	805.10	123.02%
25,000	368.75	821.85	122.87%
50,000	407.50	937.85	130.15%
75,000	446.25	1,053.85	136.16%
100,000	485.00	1,169.85	141.21%
125,000	523.75	1,285.85	145.51%
150,000	562.50	1,401.85	149.22%
175,000	601.25	1,517.85	152.45%
200,000	640.00	1,633.85	155.29%

Supporting Schedules:

Ray Water Company
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Schedule H-4
Title: Typical Bill Analysis
Page 8 of 8

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) comparing typical customer bills at varying consumption levels at present and proposed rates.

Hydrant Sales

Monthly Consumption	Present Bill	Proposed Bill	Percent Increase
-	$ -	$ -	0.00%
1,000	1.55	4.64	199.35%
2,000	3.10	9.28	199.35%
3,000	4.65	13.92	199.35%
4,000	6.20	18.56	199.35%
5,000	7.75	23.20	199.35%
6,000	9.30	27.84	199.35%
7,000	10.85	32.48	199.35%
8,000	12.40	37.12	199.35%
9,000	13.95	41.76	199.35%
10,000	15.50	46.40	199.35%
15,000	23.25	69.60	199.35%
20,000	31.00	92.80	199.35%
25,000	38.75	116.00	199.35%
50,000	77.50	232.00	199.35%
75,000	116.25	348.00	199.35%
100,000	155.00	464.00	199.35%
125,000	193.75	580.00	199.35%
150,000	232.50	696.00	199.35%
175,000	271.25	812.00	199.35%
200,000	310.00	928.00	199.35%

Supporting Schedules:

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule H-5
Title: Bill Count

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

5/8 x 3/4-Inch Meter - Residential

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	405	-	405	2.32%	-	0.00%
1,000	616	308,000	1,021	5.86%	308,000	0.23%
2,000	928	1,392,000	1,949	11.18%	1,700,000	1.24%
3,000	1,219	3,047,500	3,168	18.17%	4,747,500	3.48%
4,000	1,465	5,127,500	4,633	26.57%	9,875,000	7.23%
5,000	1,706	7,677,000	6,339	36.35%	17,552,000	12.85%
6,000	1,683	9,256,500	8,022	46.00%	26,808,500	19.63%
7,000	1,491	9,691,500	9,513	54.55%	36,500,000	26.73%
8,000	1,387	10,402,500	10,900	62.51%	46,902,500	34.34%
9,000	1,124	9,554,000	12,024	68.95%	56,456,500	41.34%
10,000	1,162	11,039,000	13,186	75.62%	67,495,500	49.42%
10,001 to 12,000	1,230	13,530,000	14,416	82.67%	81,025,500	59.33%
12,001 to 14,000	887	11,531,000	15,303	87.76%	92,556,500	67.77%
14,001 to 16,000	624	9,360,000	15,927	91.34%	101,916,500	74.63%
16,001 to 18,000	422	7,174,000	16,349	93.76%	109,090,500	79.88%
18,001 to 20,000	325	6,175,000	16,674	95.62%	115,265,500	84.40%
20,001 to 25,000	435	9,787,500	17,109	98.11%	125,053,000	91.57%
25,001 to 30,000	162	4,455,000	17,271	99.04%	129,508,000	94.83%
30,001 to 35,000	77	2,502,500	17,348	99.48%	132,010,500	96.66%
35,001 to 40,000	34	1,275,000	17,382	99.68%	133,285,500	97.60%
40,001 to 50,000	29	1,305,000	17,411	99.85%	134,590,500	98.55%
50,001 to 60,000	13	715,000	17,424	99.92%	135,305,500	99.08%
60,001 to 70,000	6	390,000	17,430	99.95%	135,695,500	99.36%
70,001 to 80,000	1	75,000	17,431	99.96%	135,770,500	99.42%
80,001 to 90,000	-	-	17,431	99.96%	135,770,500	99.42%
90,001 to 100,000	2	190,000	17,433	99.97%	135,960,500	99.55%
107,860	1	107,860	17,434	99.98%	136,068,360	99.63%
110,830	1	110,830	17,435	99.98%	136,179,190	99.71%
115,170	1	115,170	17,436	99.99%	136,294,360	99.80%
118,270	1	118,270	17,437	99.99%	136,412,630	99.89%
156,030	1	156,030	17,438	100.00%	136,568,660	100.00%
	17,438	136,568,660				

Average Number of Customers	1,453
Average Consumption	7,832
Median Consumption	6,467

Supporting Schedules:

Recap Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

5/8 x 3/4-Inch Meter - Commercial

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	11	-	11	8.94%	-	0.00%
1,000	17	8,500	28	22.76%	8,500	0.14%
2,000	6	9,000	34	27.64%	17,500	0.29%
3,000	12	30,000	46	37.40%	47,500	0.78%
4,000	7	24,500	53	43.09%	72,000	1.18%
5,000	5	22,500	58	47.15%	94,500	1.54%
6,000	4	22,000	62	50.41%	116,500	1.90%
7,000	2	13,000	64	52.03%	129,500	2.12%
8,000	1	7,500	65	52.85%	137,000	2.24%
9,000		-	65	52.85%	137,000	2.24%
10,000		-	65	52.85%	137,000	2.24%
10,001 to 12,000	4	44,000	69	56.10%	181,000	2.96%
12,001 to 14,000	6	78,000	75	60.98%	259,000	4.23%
14,001 to 16,000	2	30,000	77	62.60%	289,000	4.72%
16,001 to 18,000	4	68,000	81	65.85%	357,000	5.84%
18,001 to 20,000		-	81	65.85%	357,000	5.84%
20,001 to 25,000	7	157,500	88	71.54%	514,500	8.41%
25,001 to 30,000	8	220,000	96	78.05%	734,500	12.01%
30,001 to 35,000	2	65,000	98	79.67%	799,500	13.07%
35,001 to 40,000	1	37,500	99	80.49%	837,000	13.68%
40,001 to 50,000	2	90,000	101	82.11%	927,000	15.15%
50,001 to 60,000	1	55,000	102	82.93%	982,000	16.05%
60,001 to 70,000	1	65,000	103	83.74%	1,047,000	17.12%
70,001 to 80,000		-	103	83.74%	1,047,000	17.12%
80,001 to 90,000		-	103	83.74%	1,047,000	17.12%
90,001 to 100,000		-	103	83.74%	1,047,000	17.12%
100,800	1	100,800	104	84.55%	1,147,800	18.76%
105,900	1	105,900	105	85.37%	1,253,700	20.50%
110,600	1	110,600	106	86.18%	1,364,300	22.30%
112,200	1	112,200	107	86.99%	1,476,500	24.14%
138,000	1	138,000	108	87.80%	1,614,500	26.39%
143,000	1	143,000	109	88.62%	1,757,500	28.73%
143,400	1	143,400	110	89.43%	1,900,900	31.08%
157,300	1	157,300	111	90.24%	2,058,200	33.65%
159,800	1	159,800	112	91.06%	2,218,000	36.26%
160,200	1	160,200	113	91.87%	2,378,200	38.88%
164,700	1	164,700	114	92.68%	2,542,900	41.57%
170,000	1	170,000	115	93.50%	2,712,900	44.35%
225,100	1	225,100	116	94.31%	2,938,000	48.03%
229,800	1	229,800	117	95.12%	3,167,800	51.79%
267,400	1	267,400	118	95.93%	3,435,200	56.16%
268,700	1	268,700	119	96.75%	3,703,900	60.55%
375,700	1	375,700	120	97.56%	4,079,600	66.69%
381,700	1	381,700	121	98.37%	4,461,300	72.93%
805,000	1	805,000	122	99.19%	5,266,300	86.09%
850,600	1	850,600	123	100.00%	6,116,900	100.00%
	123	6,116,900				

Average Number of Customers	10
Average Consumption	49,731
Median Consumption	5,875

Supporting Schedules:

Recap Schedules:

Ray Water Company
Docket No. W-01380A-12-
Test Year Ended December 31, 2011

Schedule H-5
Title: Bill Count

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

1-Inch Meter - Residential

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	4	-	4	3.33%	-	0.00%
1,000	3	1,500	7	5.83%	1,500	0.03%
2,000	4	6,000	11	9.17%	7,500	0.15%
3,000		-	11	9.17%	7,500	0.15%
4,000		-	11	9.17%	7,500	0.15%
5,000		-	11	9.17%	7,500	0.15%
6,000		-	11	9.17%	7,500	0.15%
7,000		-	11	9.17%	7,500	0.15%
8,000	2	15,000	13	10.83%	22,500	0.45%
9,000	11	93,500	24	20.00%	116,000	2.34%
10,000	6	57,000	30	25.00%	173,000	3.49%
10,001 to 12,000	1	11,000	31	25.83%	184,000	3.71%
12,001 to 14,000	1	13,000	32	26.67%	197,000	3.97%
14,001 to 16,000	1	15,000	33	27.50%	212,000	4.27%
16,001 to 18,000	4	68,000	37	30.83%	280,000	5.64%
18,001 to 20,000	4	76,000	41	34.17%	356,000	7.17%
20,001 to 25,000	14	315,000	55	45.83%	671,000	13.52%
25,001 to 30,000	14	385,000	69	57.50%	1,056,000	21.28%
30,001 to 35,000	9	292,500	78	65.00%	1,348,500	27.18%
35,001 to 40,000	16	600,000	94	78.33%	1,948,500	39.27%
40,001 to 50,000	3	135,000	97	80.83%	2,083,500	41.99%
50,001 to 60,000	4	220,000	101	84.17%	2,303,500	46.42%
60,001 to 70,000	4	260,000	105	87.50%	2,563,500	51.66%
70,001 to 80,000	2	150,000	107	89.17%	2,713,500	54.69%
80,001 to 90,000	2	170,000	109	90.83%	2,883,500	58.11%
90,001 to 100,000		-	109	90.83%	2,883,500	58.11%
106,760	1	106,760	110	91.67%	2,990,260	60.26%
123,680	1	123,680	111	92.50%	3,113,940	62.76%
150,000	1	150,000	112	93.33%	3,263,940	65.78%
175,000	1	175,000	113	94.17%	3,438,940	69.31%
184,390	1	184,390	114	95.00%	3,623,330	73.02%
184,660	1	184,660	115	95.83%	3,807,990	76.74%
194,190	1	194,190	116	96.67%	4,002,180	80.66%
208,700	1	208,700	117	97.50%	4,210,880	84.86%
236,290	1	236,290	118	98.33%	4,447,170	89.63%
243,860	1	243,860	119	99.17%	4,691,030	94.54%
270,930	1	270,930	120	100.00%	4,961,960	100.00%
		-	120	100.00%	4,961,960	100.00%
	120	4,961,960				

Average Number of Customers	10
Average Consumption	41,350
Median Consumption	25,357

Supporting Schedules:

Recap Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

1-Inch Meter - Commercial

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	16	-	16	7.24%	-	0.00%
1,000	62	31,000	78	35.29%	31,000	1.57%
2,000	32	48,000	110	49.77%	79,000	4.00%
3,000	14	35,000	124	56.11%	114,000	5.77%
4,000	11	38,500	135	61.09%	152,500	7.72%
5,000	9	40,500	144	65.16%	193,000	9.77%
6,000	5	27,500	149	67.42%	220,500	11.17%
7,000	6	39,000	155	70.14%	259,500	13.14%
8,000	5	37,500	160	72.40%	297,000	15.04%
9,000	4	34,000	164	74.21%	331,000	16.76%
10,000	1	9,500	165	74.66%	340,500	17.24%
10,001 to 12,000	6	66,000	171	77.38%	406,500	20.59%
12,001 to 14,000	2	26,000	173	78.28%	432,500	21.90%
14,001 to 16,000	3	45,000	176	79.64%	477,500	24.18%
16,001 to 18,000	3	51,000	179	81.00%	528,500	26.77%
18,001 to 20,000	4	76,000	183	82.81%	604,500	30.62%
20,001 to 25,000	13	292,500	196	88.69%	897,000	45.43%
25,001 to 30,000	4	110,000	200	90.50%	1,007,000	51.00%
30,001 to 35,000	5	162,500	205	92.76%	1,169,500	59.23%
35,001 to 40,000	2	75,000	207	93.67%	1,244,500	63.03%
40,001 to 50,000	5	225,000	212	95.93%	1,469,500	74.42%
50,001 to 60,000	8	440,000	220	99.55%	1,909,500	96.71%
60,001 to 70,000	1	65,000	221	100.00%	1,974,500	100.00%
70,001 to 80,000		-	221	100.00%	1,974,500	100.00%
80,001 to 90,000		-	221	100.00%	1,974,500	100.00%
90,001 to 100,000		-	221	100.00%	1,974,500	100.00%
	221	1,974,500				

Average Number of Customers	18
Average Consumption	8,934
Median Consumption	2,036

Supporting Schedules:

Recap Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

1 1/2-Inch Meter - Residential

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-		-	-	0.00%	-	0.00%
1,000		-	-	0.00%	-	0.00%
2,000		-	-	0.00%	-	0.00%
3,000	2	5,000	2	8.33%	5,000	0.90%
4,000	3	10,500	5	20.83%	15,500	2.80%
5,000	3	13,500	8	33.33%	29,000	5.24%
6,000	3	16,500	11	45.83%	45,500	8.22%
7,000	1	6,500	12	50.00%	52,000	9.39%
8,000		-	12	50.00%	52,000	9.39%
9,000		-	12	50.00%	52,000	9.39%
10,000		-	12	50.00%	52,000	9.39%
10,001 to 12,000		-	12	50.00%	52,000	9.39%
12,001 to 14,000		-	12	50.00%	52,000	9.39%
14,001 to 16,000		-	12	50.00%	52,000	9.39%
16,001 to 18,000		-	12	50.00%	52,000	9.39%
18,001 to 20,000	1	19,000	13	54.17%	71,000	12.83%
20,001 to 25,000	1	22,500	14	58.33%	93,500	16.89%
25,001 to 30,000	1	27,500	15	62.50%	121,000	21.86%
30,001 to 35,000	2	65,000	17	70.83%	186,000	33.60%
35,001 to 40,000	1	37,500	18	75.00%	223,500	40.38%
40,001 to 50,000	2	90,000	20	83.33%	313,500	56.64%
50,001 to 60,000	2	110,000	22	91.67%	423,500	76.51%
60,001 to 70,000	2	130,000	24	100.00%	553,500	100.00%
70,001 to 80,000		-	24	100.00%	553,500	100.00%
80,001 to 90,000		-	24	100.00%	553,500	100.00%
90,001 to 100,000		-	24	100.00%	553,500	100.00%
	24	553,500				

Average Number of Customers	2
Average Consumption	23,063
Median Consumption	16,000

Supporting Schedules:

Recap Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

1 1/2-Inch Meter - Commercial

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-		-	-	0.00%	-	0.00%
1,000	10	5,000	10	83.33%	5,000	50.00%
2,000	1	1,500	11	91.67%	6,500	65.00%
3,000		-	11	91.67%	6,500	65.00%
4,000	1	3,500	12	100.00%	10,000	100.00%
5,000		-	12	100.00%	10,000	100.00%
6,000		-	12	100.00%	10,000	100.00%
7,000		-	12	100.00%	10,000	100.00%
8,000		-	12	100.00%	10,000	100.00%
9,000		-	12	100.00%	10,000	100.00%
10,000		-	12	100.00%	10,000	100.00%
10,001 to 12,000		-	12	100.00%	10,000	100.00%
12,001 to 14,000		-	12	100.00%	10,000	100.00%
14,001 to 16,000		-	12	100.00%	10,000	100.00%
16,001 to 18,000		-	12	100.00%	10,000	100.00%
18,001 to 20,000		-	12	100.00%	10,000	100.00%
20,001 to 25,000		-	12	100.00%	10,000	100.00%
25,001 to 30,000		-	12	100.00%	10,000	100.00%
30,001 to 35,000		-	12	100.00%	10,000	100.00%
35,001 to 40,000		-	12	100.00%	10,000	100.00%
40,001 to 50,000		-	12	100.00%	10,000	100.00%
50,001 to 60,000		-	12	100.00%	10,000	100.00%
60,001 to 70,000		-	12	100.00%	10,000	100.00%
70,001 to 80,000		-	12	100.00%	10,000	100.00%
80,001 to 90,000		-	12	100.00%	10,000	100.00%
90,001 to 100,000		-	12	100.00%	10,000	100.00%
		-	12	100.00%	10,000	100.00%
	12	10,000				

Average Number of Customers	1
Average Consumption	833
Median Consumption	600

Supporting Schedules:

Recap Schedules:

Required for: All Utilities [X]
Class A [ ]
Class B [ ]
Class C [ ]
Class D [ ]
Specl Reqmt [ ]

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

2-Inch Meter - Residential

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	6	-	6	9.84%	-	0.00%
1,000		-	6	9.84%	-	0.00%
2,000	1	1,500	7	11.48%	1,500	0.04%
3,000		-	7	11.48%	1,500	0.04%
4,000		-	7	11.48%	1,500	0.04%
5,000		-	7	11.48%	1,500	0.04%
6,000		-	7	11.48%	1,500	0.04%
7,000	1	6,500	8	13.11%	8,000	0.22%
8,000		-	8	13.11%	8,000	0.22%
9,000	1	8,500	9	14.75%	16,500	0.44%
10,000		-	9	14.75%	16,500	0.44%
10,001 to 12,000		-	9	14.75%	16,500	0.44%
12,001 to 14,000		-	9	14.75%	16,500	0.44%
14,001 to 16,000	3	45,000	12	19.67%	61,500	1.66%
16,001 to 18,000		-	12	19.67%	61,500	1.66%
18,001 to 20,000		-	12	19.67%	61,500	1.66%
20,001 to 25,000	6	135,000	18	29.51%	196,500	5.30%
25,001 to 30,000	2	55,000	20	32.79%	251,500	6.78%
30,001 to 35,000	2	65,000	22	36.07%	316,500	8.53%
35,001 to 40,000	2	75,000	24	39.34%	391,500	10.56%
40,001 to 50,000	4	180,000	28	45.90%	571,500	15.41%
50,001 to 60,000	6	330,000	34	55.74%	901,500	24.31%
60,001 to 70,000	6	390,000	40	65.57%	1,291,500	34.83%
70,001 to 80,000	2	150,000	42	68.85%	1,441,500	38.87%
80,001 to 90,000	5	425,000	47	77.05%	1,866,500	50.33%
90,001 to 100,000	4	380,000	51	83.61%	2,246,500	60.58%
100,300	1	100,300	52	85.25%	2,346,800	63.28%
118,900	1	118,900	53	86.89%	2,465,700	66.49%
120,900	1	120,900	54	88.52%	2,586,600	69.75%
122,100	1	122,100	55	90.16%	2,708,700	73.04%
139,500	1	139,500	56	91.80%	2,848,200	76.80%
146,800	1	146,800	57	93.44%	2,995,000	80.76%
168,700	1	168,700	58	95.08%	3,163,700	85.31%
176,100	1	176,100	59	96.72%	3,339,800	90.06%
179,100	1	179,100	60	98.36%	3,518,900	94.89%
189,600	1	189,600	61	100.00%	3,708,500	100.00%
		-	61	100.00%	3,708,500	100.00%
	61	3,708,500				

Average Number of Customers	5
Average Consumption	60,795
Median Consumption	50,417

Supporting Schedules:

Recap Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

2-Inch Meter - Commercial

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	8	-	8	13.56%	-	0.00%
1,000	10	5,000	18	30.51%	5,000	0.61%
2,000	2	3,000	20	33.90%	8,000	0.97%
3,000	1	2,500	21	35.59%	10,500	1.27%
4,000	1	3,500	22	37.29%	14,000	1.70%
5,000	3	13,500	25	42.37%	27,500	3.33%
6,000	2	11,000	27	45.76%	38,500	4.67%
7,000	1	6,500	28	47.46%	45,000	5.45%
8,000	1	7,500	29	49.15%	52,500	6.36%
9,000	1	8,500	30	50.85%	61,000	7.39%
10,000	2	19,000	32	54.24%	80,000	9.70%
10,001 to 12,000	1	11,000	33	55.93%	91,000	11.03%
12,001 to 14,000	1	13,000	34	57.63%	104,000	12.61%
14,001 to 16,000	2	30,000	36	61.02%	134,000	16.24%
16,001 to 18,000	2	34,000	38	64.41%	168,000	20.36%
18,001 to 20,000	8	152,000	46	77.97%	320,000	38.79%
20,001 to 25,000	4	90,000	50	84.75%	410,000	49.70%
25,001 to 30,000	2	55,000	52	88.14%	465,000	56.36%
30,001 to 35,000	3	97,500	55	93.22%	562,500	68.18%
35,001 to 40,000	1	37,500	56	94.92%	600,000	72.73%
40,001 to 50,000		-	56	94.92%	600,000	72.73%
50,001 to 60,000		-	56	94.92%	600,000	72.73%
60,001 to 70,000	1	65,000	57	96.61%	665,000	80.61%
70,001 to 80,000	1	75,000	58	98.31%	740,000	89.70%
80,001 to 90,000	1	85,000	59	100.00%	825,000	100.00%
90,001 to 100,000		-	59	100.00%	825,000	100.00%
	59	825,000				

Average Number of Customers	5
Average Consumption	13,983
Median Consumption	8,500

Supporting Schedules:

Recap Schedules:

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

3-Inch Meter - Commercial

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-		-	-	0.00%	-	0.00%
1,000		-	-	0.00%	-	0.00%
2,000		-	-	0.00%	-	0.00%
3,000		-	-	0.00%	-	0.00%
4,000		-	-	0.00%	-	0.00%
5,000		-	-	0.00%	-	0.00%
6,000		-	-	0.00%	-	0.00%
7,000		-	-	0.00%	-	0.00%
8,000		-	-	0.00%	-	0.00%
9,000		-	-	0.00%	-	0.00%
10,000		-	-	0.00%	-	0.00%
10,001 to 12,000		-	-	0.00%	-	0.00%
12,001 to 14,000		-	-	0.00%	-	0.00%
14,001 to 16,000		-	-	0.00%	-	0.00%
16,001 to 18,000		-	-	0.00%	-	0.00%
18,001 to 20,000		-	-	0.00%	-	0.00%
20,001 to 25,000		-	-	0.00%	-	0.00%
25,001 to 30,000		-	-	0.00%	-	0.00%
30,001 to 35,000	1	32,500	1	8.33%	32,500	0.48%
35,001 to 40,000		-	1	8.33%	32,500	0.48%
40,001 to 50,000		-	1	8.33%	32,500	0.48%
50,001 to 60,000	1	55,000	2	16.67%	87,500	1.29%
60,001 to 70,000		-	2	16.67%	87,500	1.29%
70,001 to 80,000		-	2	16.67%	87,500	1.29%
80,001 to 90,000		-	2	16.67%	87,500	1.29%
90,001 to 100,000	1	95,000	3	25.00%	182,500	2.68%
130,600	1	130,600	4	33.33%	313,100	4.60%
261,000	1	261,000	5	41.67%	574,100	8.44%
500,700	1	500,700	6	50.00%	1,074,800	15.80%
627,700	1	627,700	7	58.33%	1,702,500	25.02%
903,600	1	903,600	8	66.67%	2,606,100	38.30%
909,200	1	909,200	9	75.00%	3,515,300	51.66%
995,100	1	995,100	10	83.33%	4,510,400	66.29%
1,073,500	1	1,073,500	11	91.67%	5,583,900	82.07%
1,220,200	1	1,220,200	12	100.00%	6,804,100	100.00%
	12	6,804,100				

Average Number of Customers	1
Average Consumption	567,008
Median Consumption	564,200

Supporting Schedules:

Recap Schedules:

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

4-Inch Meter - Residential

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	10	-	10	27.78%	-	0.00%
1,000	1	500	11	30.56%	500	0.00%
2,000		-	11	30.56%	500	0.00%
3,000		-	11	30.56%	500	0.00%
4,000		-	11	30.56%	500	0.00%
5,000		-	11	30.56%	500	0.00%
6,000		-	11	30.56%	500	0.00%
7,000		-	11	30.56%	500	0.00%
8,000		-	11	30.56%	500	0.00%
9,000		-	11	30.56%	500	0.00%
10,000		-	11	30.56%	500	0.00%
10,001 to 12,000		-	11	30.56%	500	0.00%
12,001 to 14,000		-	11	30.56%	500	0.00%
14,001 to 16,000		-	11	30.56%	500	0.00%
16,001 to 18,000		-	11	30.56%	500	0.00%
18,001 to 20,000		-	11	30.56%	500	0.00%
20,001 to 25,000		-	11	30.56%	500	0.00%
25,001 to 30,000	1	27,500	12	33.33%	28,000	0.08%
30,001 to 35,000		-	12	33.33%	28,000	0.08%
35,001 to 40,000		-	12	33.33%	28,000	0.08%
40,001 to 50,000		-	12	33.33%	28,000	0.08%
50,001 to 60,000		-	12	33.33%	28,000	0.08%
60,001 to 70,000		-	12	33.33%	28,000	0.08%
70,001 to 80,000		-	12	33.33%	28,000	0.08%
80,001 to 90,000		-	12	33.33%	28,000	0.08%
90,001 to 100,000		-	12	33.33%	28,000	0.08%
350,000	1	350,000	13	36.11%	378,000	1.09%
370,000	1	370,000	14	38.89%	748,000	2.15%
433,000	1	433,000	15	41.67%	1,181,000	3.40%
487,000	1	487,000	16	44.44%	1,668,000	4.80%
778,000	1	778,000	17	47.22%	2,446,000	7.04%
820,400	1	820,400	18	50.00%	3,266,400	9.40%
886,000	1	886,000	19	52.78%	4,152,400	11.95%
935,000	1	935,000	20	55.56%	5,087,400	14.64%
940,000	1	940,000	21	58.33%	6,027,400	17.35%
967,000	1	967,000	22	61.11%	6,994,400	20.13%
1,055,000	1	1,055,000	23	63.89%	8,049,400	23.17%
1,064,000	1	1,064,000	24	66.67%	9,113,400	26.23%
1,101,000	1	1,101,000	25	69.44%	10,214,400	29.40%
1,121,000	1	1,121,000	26	72.22%	11,335,400	32.62%
1,387,000	1	1,387,000	27	75.00%	12,722,400	36.61%
1,614,000	1	1,614,000	28	77.78%	14,336,400	41.26%
1,668,000	1	1,668,000	29	80.56%	16,004,400	46.06%
1,731,000	1	1,731,000	30	83.33%	17,735,400	51.04%
2,124,000	1	2,124,000	31	86.11%	19,859,400	57.15%
2,357,000	1	2,357,000	32	88.89%	22,216,400	63.94%
2,403,000	1	2,403,000	33	91.67%	24,619,400	70.85%
2,510,000	1	2,510,000	34	94.44%	27,129,400	78.08%
2,772,000	1	2,772,000	35	97.22%	29,901,400	86.05%
4,846,000	1	4,846,000	36	100.00%	34,747,400	100.00%
	36	34,747,400				

Average Number of Customers	3
Average Consumption	965,206
Median Consumption	853,200

Supporting Schedules:

Recap Schedules:

Required for: All Utilities [X]
Class A [ ]
Class B [ ]
Class C [ ]
Class D [ ]
Specl Reqmt [ ]

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

4-Inch Meter - Commercial

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	6	-	6	85.71%	-	0.00%
1,000		-	6	85.71%	-	0.00%
2,000		-	6	85.71%	-	0.00%
3,000		-	6	85.71%	-	0.00%
4,000		-	6	85.71%	-	0.00%
5,000		-	6	85.71%	-	0.00%
6,000		-	6	85.71%	-	0.00%
7,000		-	6	85.71%	-	0.00%
8,000		-	6	85.71%	-	0.00%
9,000		-	6	85.71%	-	0.00%
10,000		-	6	85.71%	-	0.00%
10,001 to 12,000		-	6	85.71%	-	0.00%
12,001 to 14,000		-	6	85.71%	-	0.00%
14,001 to 16,000		-	6	85.71%	-	0.00%
16,001 to 18,000		-	6	85.71%	-	0.00%
18,001 to 20,000		-	6	85.71%	-	0.00%
20,001 to 25,000		-	6	85.71%	-	0.00%
25,001 to 30,000	1	27,500	7	100.00%	27,500	100.00%
30,001 to 35,000		-	7	100.00%	27,500	100.00%
35,001 to 40,000		-	7	100.00%	27,500	100.00%
40,001 to 50,000		-	7	100.00%	27,500	100.00%
50,001 to 60,000		-	7	100.00%	27,500	100.00%
60,001 to 70,000		-	7	100.00%	27,500	100.00%
70,001 to 80,000		-	7	100.00%	27,500	100.00%
80,001 to 90,000		-	7	100.00%	27,500	100.00%
90,001 to 100,000		-	7	100.00%	27,500	100.00%
	7	27,500				

Average Number of Customers	1
Average Consumption	3,929
Median Consumption	-

Supporting Schedules:

Recap Schedules:

Note:
One of the monthly minimum amounts was $99 instead of $165, so the bill count revenue generated must be reduced by $66 to account for this partial month.

Required for: All Utilities [X]
Class A [ ]
Class B [ ]
Class C [ ]
Class D [ ]
Specl Reqmt [ ]

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

6-Inch Meter - Commercial

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-	1	-	1	8.33%	-	0.00%
1,000		-	1	8.33%	-	0.00%
2,000		-	1	8.33%	-	0.00%
3,000		-	1	8.33%	-	0.00%
4,000		-	1	8.33%	-	0.00%
5,000		-	1	8.33%	-	0.00%
6,000		-	1	8.33%	-	0.00%
7,000		-	1	8.33%	-	0.00%
8,000		-	1	8.33%	-	0.00%
9,000		-	1	8.33%	-	0.00%
10,000		-	1	8.33%	-	0.00%
10,001 to 12,000		-	1	8.33%	-	0.00%
12,001 to 14,000		-	1	8.33%	-	0.00%
14,001 to 16,000		-	1	8.33%	-	0.00%
16,001 to 18,000		-	1	8.33%	-	0.00%
18,001 to 20,000		-	1	8.33%	-	0.00%
20,001 to 25,000		-	1	8.33%	-	0.00%
25,001 to 30,000		-	1	8.33%	-	0.00%
30,001 to 35,000		-	1	8.33%	-	0.00%
35,001 to 40,000		-	1	8.33%	-	0.00%
40,001 to 50,000		-	1	8.33%	-	0.00%
50,001 to 60,000		-	1	8.33%	-	0.00%
60,001 to 70,000		-	1	8.33%	-	0.00%
70,001 to 80,000		-	1	8.33%	-	0.00%
80,001 to 90,000		-	1	8.33%	-	0.00%
90,001 to 100,000		-	1	8.33%	-	0.00%
248,000	1	248,000	2	16.67%	248,000	2.16%
267,000	1	267,000	3	25.00%	515,000	4.49%
766,000	1	766,000	4	33.33%	1,281,000	11.16%
507,000	1	507,000	5	41.67%	1,788,000	15.58%
567,000	1	567,000	6	50.00%	2,355,000	20.52%
735,000	1	735,000	7	58.33%	3,090,000	26.92%
904,000	1	904,000	8	66.67%	3,994,000	34.80%
972,000	1	972,000	9	75.00%	4,966,000	43.27%
1,420,000	1	1,420,000	10	83.33%	6,386,000	55.64%
1,833,000	1	1,833,000	11	91.67%	8,219,000	71.61%
3,258,000	1	3,258,000	12	100.00%	11,477,000	100.00%
	12	11,477,000				

Average Number of Customers	1
Average Consumption	956,417
Median Consumption	651,000

Supporting Schedules:

Recap Schedules:

Required for:	
All Utilities	X
Class A	
Class B	
Class C	
Class D	
Specl Reqmt	

Explanation:
Schedule(s) showing billing activity by block for each rate schedule.

Hydrant Sales

Block	Number of Bills by Block	Consumption By Blocks	Cumulative Bills No.	Cumulative Bills % of Total	Cumulative Consumption Amount	Cumulative Consumption % of Total
-		-	-	0.00%	-	0.00%
1,000		-	-	0.00%	-	0.00%
2,000		-	-	0.00%	-	0.00%
3,000		-	-	0.00%	-	0.00%
4,000		-	-	0.00%	-	0.00%
5,000		-	-	0.00%	-	0.00%
6,000		-	-	0.00%	-	0.00%
7,000		-	-	0.00%	-	0.00%
8,000		-	-	0.00%	-	0.00%
9,000		-	-	0.00%	-	0.00%
10,000		-	-	0.00%	-	0.00%
10,001 to 12,000	1	11,000	1	16.67%	11,000	0.91%
12,001 to 14,000		-	1	16.67%	11,000	0.91%
14,001 to 16,000		-	1	16.67%	11,000	0.91%
16,001 to 18,000		-	1	16.67%	11,000	0.91%
18,001 to 20,000		-	1	16.67%	11,000	0.91%
20,001 to 25,000	1	22,500	2	33.33%	33,500	2.76%
25,001 to 30,000		-	2	33.33%	33,500	2.76%
30,001 to 35,000		-	2	33.33%	33,500	2.76%
35,001 to 40,000		-	2	33.33%	33,500	2.76%
40,001 to 50,000		-	2	33.33%	33,500	2.76%
50,001 to 60,000		-	2	33.33%	33,500	2.76%
60,001 to 70,000		-	2	33.33%	33,500	2.76%
70,001 to 80,000		-	2	33.33%	33,500	2.76%
80,001 to 90,000	1	85,000	3	50.00%	118,500	9.76%
90,001 to 100,000		-	3	50.00%	118,500	9.76%
232,852	1	232,852	4	66.67%	351,352	28.94%
319,396	1	319,396	5	83.33%	670,748	55.25%
543,230	1	543,230	6	100.00%	1,213,978	100.00%
	6	1,213,978				

Average Number of Customers	1
Average Consumption	202,330
Median Consumption	158,926

Supporting Schedules:

Recap Schedules:

EXHIBIT 3

WATER USE DATA SHEET

NAME OF COMPANY	Ray Water Company
ADEQ Public Water System Number:	10-095

MONTH/YEAR (12 Months of Test Year)	NUMBER OF CUSTOMERS	GALLONS SOLD (Thousands)	GALLONS PUMPED (Thousands)
1. January	1,519	13,404	13,940
2. February	1,522	12,819	14,455
3. March	1,526	14,067	18,774
4. April	1,528	17,402	20,770
5. May	1,523	19,770	22,814
6. June	1,523	19,810	29,346
7. July	1,534	27,303	24,079
8. August	1,524	22,235	33,363
9. September	1,518	19,288	15,311
10. October	1,517	12,437	17,769
11. November	1,516	13,404	15,906
12. December	1,519	15,067	9,124
TOTAL	N/A	207,006	* 235,651

Is the water utility located in an ADWR Active Management Area ("AMA")?

[X] YES [ ] NO

Does the Company have an ADWR gallons per capita day ("GPCD") requirement?

[X] YES [ ] NO

If Yes, please provide the GPCD amount: 121

***Note:** If you are filing for more than one system, please provide separate data sheets for each system. For explanation of any of the above, please contact the Engineering Supervisor at 602-542-7277.*

** Gallons pumped cannot equal or be less than the gallons sold.*

EXHIBIT 4

Company Name: Ray Water Company	Test Year Ended: 31-Dec-11

WATER COMPANY PLANT DESCRIPTION

WELLS

ADWR ID Number*	Pump Horsepower	Pump Yield (gpm)	Casing Depth (Feet)	Casing Diameter (inches)	Meter Size (inches)	Year Drilled
55-609464	40	250	458	12"	6"	1969
55-609465	15	125	425	12"	6"	1973
55-609466	15	75	331	8"	4"	1963
55-800420	60	325	612	12"	6"	1983
55-212103	75	325	600	14"	6"	2007
55-214966	75	375	615	14"	6"	2007
55-219154	75	375	660	12"	6"	2010

* Arizona Department of Water Resources Identification Number

OTHER WATER SOURCES

Name or Description	Capacity (gpm)	Gallons Purchased or Obtained (in thousands)
N/A		

BOOSTER PUMPS	
Horsepower	Quantity
25.0	1
20.0	1
15.0	2
30.0	5

FIRE HYDRANTS	
Quantity Standard	Quantity Other
70	N/A

STORAGE TANKS	
Capacity	Quantity
50,000	3
90,000	1
250,000	1
285,000	1

PRESSURE TANKS	
Capacity	Quantity
5,000	2
3,000	1

Company Name: Ray Water Company	Test Year Ended: 31-Dec-11

WATER COMPANY PLANT DESCRIPTION CONTINUED

MAINS

Size (in inches)	Material	Length (in feet)
2		
3	AC	9,730
4	AC	29,900
5		
6	AC	25,773
8	C900 & AC	960 & 4,410
10		
12	C900	240
4	PVC 900	735
6	PVC 900	17,549
8	PVC 900	20,779
6	DIP	280
12	DIP	615

CUSTOMER METERS

Size (in inches)	Quantity
5/8 x 3/4	1509
3/4	
1	30
1 1/2	3
2	12
Comp. 3	1
Turbo 3	1
Comp. 4	3
Turbo 4	1
Comp. 6	1
Turbo 6	

For the following three items, please list the utility owned assets in each category.

TREATMENT EQUIPMENT:

N/A

STRUCTURES:

Cyclone/razor wire fencing around all six well sites.

50 square foot storage building at well #4.

OTHER:

Office furniture and equipment, computers.

Miscellaneous field equipment.

EXHIBIT 5

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
GARY PIERCE, CHAIRMAN
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP
BRENDA BURNS

APPLICATION OF RAY WATER COMPANY FOR A PERMANENT INCREASE IN ITS WATER RATES

DIRECT TESTIMONY OF MATTHEW ROWELL

The Direct Testimony of Matthew Rowell is attached.

COST OF CAPITAL

Table of Contents

I. Introduction

Q. Please state your name and business address.

A. My name is Matthew Rowell. My business address is PO Box 51628, Phoenix, Arizona.

Q. By whom are you employed and what are your duties and responsibilities?

A. I am a managing member of Desert Mountain Analytical Services ("DMAS") a consulting firm specializing in utility regulatory matters. In that capacity I have provided testimony regarding various utility regulatory issues before the Arizona Corporation Commission ("Commission").

Q. Please state your background and qualifications in the field of utility regulation.

A. A statement of my qualifications is attached as Exhibit 1 to this testimony.

Q. What is the purpose of your testimony?

A. This testimony presents and explains Ray Water Company's ("Ray") position on the issues of the overall rates of return to be approved, the costs of equity and debt faced by Ray and Ray's capital structure.

Q. Please summarize your testimony.

A. This testimony demonstrates that the Ray is not currently earning the rate of return authorized in it's last general rate case and that the previously authorized rate of return is not sufficient to cover Ray's current cost of capital. The overall rate of return recommended is: 10.56%.

The recommended overall rate of return is supported by a 10.91% cost of equity and a 6.25% cost of debt.

The costs of equity are supported by an analysis of the returns on equity currently being earned by a sample of water and natural gas utilities (the comparable earnings analysis.) The comparable earnings analysis is supplemented by results derived from the Discounted Cash Flow ("DCF") and Capital Asset Pricing ("CAPM") models. The costs of debt are based on the actual interest rate for Ray's long term debt.

II. Cost of Capital Issues Facing Arizona's Water and Waste Water Utilities.

Q. Please explain the concept of "cost of capital."

A. The cost of capital is the expected return on an investment necessary to attract investors to an enterprise. The opportunity cost associated with choosing one investment over others is the

forgone expected return of the other potential investments. A utility seeking to attract investors must provide a return at least equal to the return being provided by similar (in terms of risk) other enterprises. That return necessary to attract investment is the utility's "cost of capital." A utility that earns a return on its rate base at least equal to its cost of capital (and that is efficiently managed) will be able to attract necessary capital and maintain its financial integrity.

The overall cost of capital, or weighted average cost of capital ("WACC"), is the weighted average of the cost of debt and the cost of equity. A utility's cost of debt is readily observable (it is the actual interest rate on its debt) but the cost of equity is not directly observable and must be estimated.

Q. What is the difference between a utility's cost of equity, the authorized return on equity and the realized return on equity?

A. The cost of equity is the forward looking opportunity cost of an equity investment. It is also the expected return required to attract equity capital. The authorized return on equity is the estimate of the cost of equity that the regulatory commission uses to determine the utility's revenue requirement. The realized (or actual) return on equity is a backward looking accounting measurement that shows the return on equity that was actually realized over a given year. The realized return on equity is calculated by dividing the utility's net income by its total equity balance.

Q. Please discuss the challenges facing Arizona utilities with respect to the cost of equity.

A. Water and wastewater utilities in Arizona have been challenged by both the authorized ROEs awarded by the Arizona Corporation Commission ("ACC" or "Commission") and by the level of realized ROEs they have actually been able to achieve. ACC authorized ROEs have been low relative to those authorized in other states. And equally important the policies and practices of the ACC make it very difficult for Arizona's water utilities[1] to realize the ROEs authorized by the Commission. In fact a review of realized ROEs of Class A Arizona water utilities reveals that on average they actually provide a return of only **2.91%** to their equity investors over the past 11 years.[2] Looking at just the past 5 years reveals that the same utilities provided an average return on equity of only **1.75%**.[3]

A 1.75% utility investor return on equity is absurd. A quick review of CD rates demonstrates that five-year "jumbo" CDs (requiring a deposit of at least $100,000) provide returns around 1.75%.[4] And a CD is not an investment – they are backed by the FDIC so there is no chance of losing one's money. Secondly, CDs carry no liability risks for the CD holder – no one is going to sue you claiming that your CD had an odor issue. Third, CDs will never necessitate subsequent investment by the CD holder – unlike a utility company which could have

[1] Throughout this testimony the term "water utilities" will be used to refer to both water and wastewater utilities collectively.
[2] This is a weighted average of the realized returns for each company shown in Table 3 over the 11 years (2000-2010.) The returns were weighted by the equity balances of each utility in each year.
[3] This is a weighted average of the realized returns for each company shown in Table 3 over the 5 years (2006-2010.) The returns were weighted by the equity balances of each utility in each year.
[4] www.bankrate.com.

a well or system failure at any moment necessitating another large investment. Fourth, CDs carry no regulatory costs or risks – CD holders do not have to monitor regulatory changes, policies and decisions; they do not have to meet regulatory standards and timelines, they do not face any costs of compliance. Fifth, CD holders do not have to provide any good or service to anyone at all – there are no customers to care for, no water to be tested and delivered, no community that needs support and involvement.

Providing water utility service requires a myriad of responsibilities that CD holders just don't have: infrastructure has to be maintained (wells, mains, booster stations, storage tanks, wellsites, office space, inventory storage), managing customer connect and disconnects, billing, employees to oversee, vendors to deal with and pay, taxes to calculate and pay, regulatory reports and inspections to complete and file, insurance (property, liability, health, worker's comp) to purchase and maintain, etc. These are significant responsibilities that Ray's manager-owner's have to bear and that the holder of a CD does not have to bear.

Q. How do you support your claim that authorized ROEs in Arizona are below what is typical in other states?

A. Several sources of information indicate that authorized ROEs in Arizona are below those typical in other states. Independent equity analysts have indicated that Arizona's authorized ROEs are below what is typical in other states and my own research on this point confirms this. Additionally, specific Commission decisions in previous Global, Litchfield Park and Arizona American rate cases provide anecdotal evidence of the Commission's propensity to authorize ROEs below those recommended by its Staff.

In April of 2011 Janney Montgomery Scott, a well respected investment firm with roots tracing back to 1832, introduced its Regulatory Climate Indicator (RCI) report which examined and ranked several states based on the regulatory climate for water utilities.[5] Janney collected information on 16 states where investor owned water utilities are active. Of those states Arizona was ranked dead last. While other factors (discussed below) influenced this ranking, the most important variable in Janney's rankings is the average ROE granted to water utilities by the state commission and Arizona's propensity to authorize low ROEs had a substantial impact on Janney's ranking of Arizona.

Each November Public Utilities Fortnightly publishes authorized ROEs from utility commissions across the country. Examining several years of these Public Utilities Fortnightly surveys indicates quite clearly that ROEs granted in Arizona are well below what is typical nationally – and more so when one compares those to the Commission's ROE decisions for water companies.

Three recent cases illustrate the Arizona Commission's propensity to authorize ROEs that are not only low compared to national norms but are even below those recommended by the Commission Staff. First, in Decision 70372[6] the Commission authorized an ROE of 8.8% for Arizona-American's Anthem district. This was well below the 10.3% recommended by Commission Staff. Second, in Global's last rate case the Commission authorized an ROE of

[5] Janney Water Journal - April 2011
[6] 6/13/2008.

9.0% – a full 100 basis points below Staff's recommended 10.0% return (see Decision 71878.[7]) Finally, in Litchfield Park Service Company's last rate case (Decision 72026[8]) the Commission imposed the astonishingly low ROE of 8.01% when the Staff was recommending 9.2%. These three examples are the most extreme cases but they are certainly not the only cases where authorized ROEs were below those recommended by the Staff.

Q. Besides their low levels are there other notable aspects of authorized ROEs in Arizona?

A. The Commission's propensity to adopt authorized ROEs significantly below those recommended by the ALJs, by its Staff and in some cases even by RUCO greatly increases the level of regulatory uncertainty faced by Arizona's utilities. The signal this sends to equity investors is that the ACC cares little about their ability to receive an adequate return on or of their investment. Rather, the ACC appears to view the authorized ROE as a highly malleable variable that it can set with little technical justification. This sends a chilling signal to equity investors increasing the cost of equity capital for Arizona utilities.

Anyone who reads cost of capital testimony in Arizona has to have noticed that almost every Arizona utility makes this point clearly: The Commission has, because of its decisions and actions, achieved a national reputation for being anti-investment in water. The fact that Arizona lies in the midst of the Sonoran Desert and the Rocky Mountain states – two of the most water-challenged areas in the United States – only increases investors' bafflement and fear of the Commission.

Q. Turning now to achieved ROEs, how do you support your claim that Arizona's water and wastewater utilities are not achieving their authorized ROEs?

A. I calculated the realized ROEs from 2000 to 2010 of several of the larger water utilities in the state. Not only are the realized ROEs significantly below what water utilities are earning outside of Arizona (discussed further below) but they don't come close to the authorized ROEs established by the ACC.

Table 3: Average Realized and Authorized ROEs 2007-2010[9]

Company	11 Year Average Realized ROE 2000-2010	Average Authorized ROE Effective 2000-2010
Arizona Water	8.38%	9.51%
Arizona American (Water and Sewer)	0.70%	9.97%
Rio Rico (Water and Sewer)	4.77%	8.70%

[7] 9/15/2010.
[8] 12/10/2010.
[9] Source of realized ROEs: Net income and equity balances taken from ACC annual reports. Source of authorized ROEs: ACC Decisions 61831, 67093, 68858, 69440, 70209, 70351, 70372, 71410, 72047, 64282, 66849, 68302, 71845, 68176, 71308, 65436, 72026 and 67279

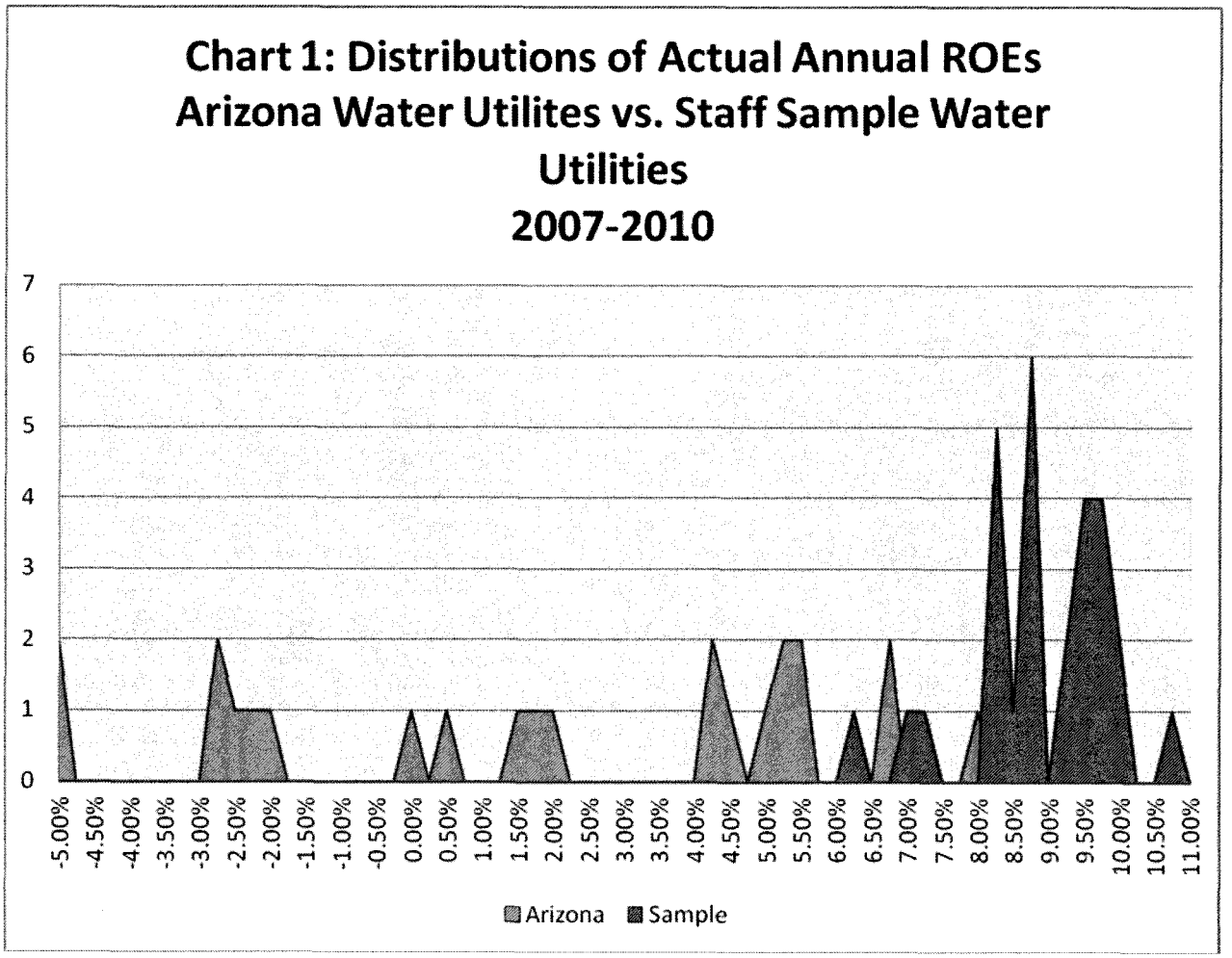
LPSCO (Water and Sewer)	5.35%	8.75%
Chaparral City	-1.05%	9.60%

Table 3 shows clearly that Arizona's water industry is characterized primarily by under-earning. In fact over the 55 observations (5 companies over 11 years each) there were only eight instances where the authorized ROE was achieved in a given year. **Over the past 5 years the authorized ROE was not achieved by any of the utilities in any year**. This statewide history of low returns naturally causes equity investors to perceive Arizona as a high risk environment.

The evidence demonstrates that this propensity for under-earning is much more prevalent among Arizona's water utilities than it is among the utilities that are typically used by Staff and RUCO as the sample for developing recommendations regarding authorized ROEs.

Chart 1 below compares the distribution of actual ROEs of the Arizona utilities presented above compared to the distribution of actual ROEs of a sample of publicly traded water companies. This sample includes the six water utilities typically used by Staff in their cost of equity analysis as well as one other (smaller) publically traded water utility.[10]

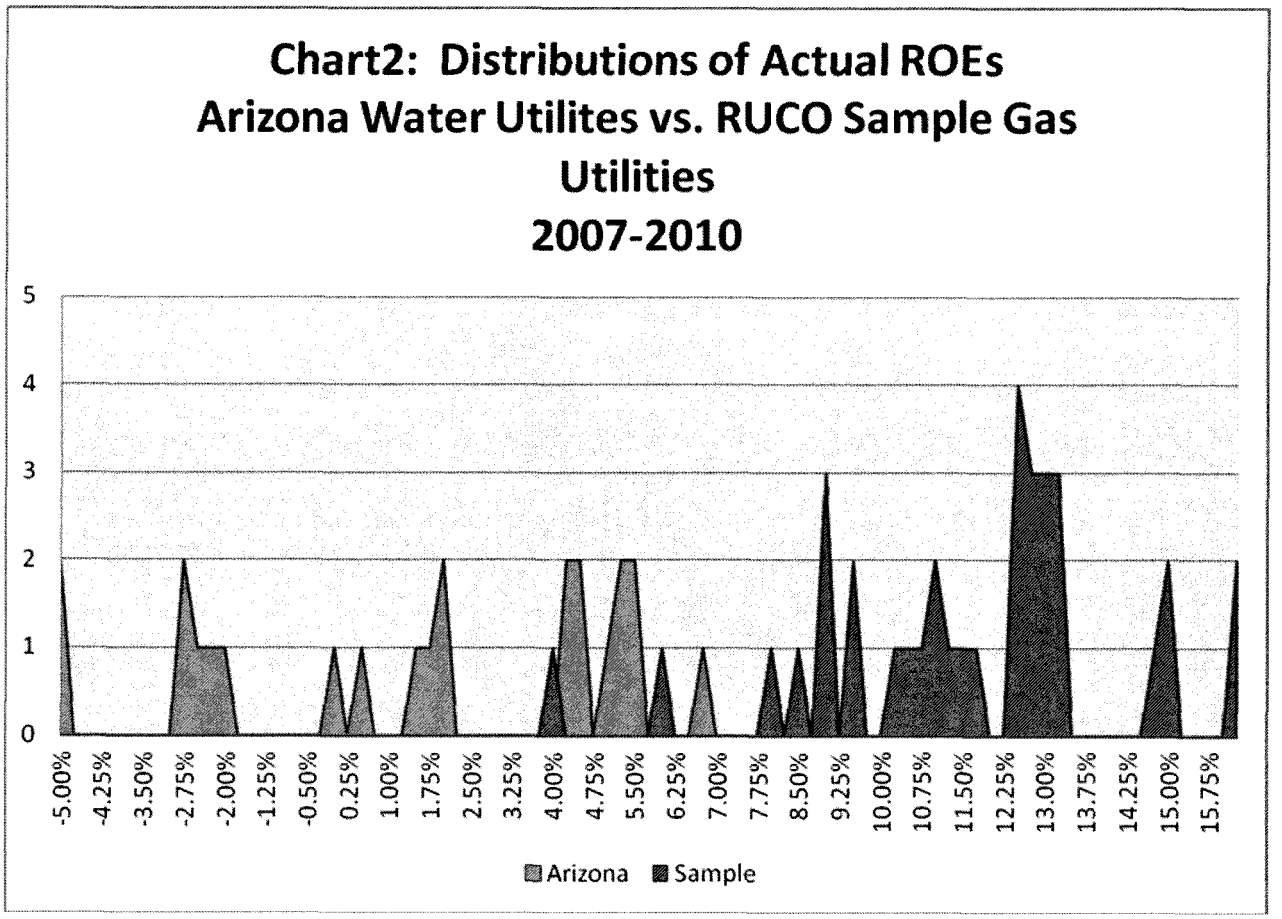
[10] The water utilities included in the sample are SJW Corp (SJW), American States Water (AWR), California Water (CWT), Aqua American (WTR), Connecticut Water (CTWS), Middlesex Water (MSEX) and York Water Co. (YORW.)



The Arizona realized ROEs have both a lower mean and a wider spread relative to the sample of utilities.

Making the same comparison but using the natural gas distribution utilities by RUCO[11] in their cost of equity analyses reveals the same conclusion.

[11] The gas utilities included in the sample are AGL Resources, Inc (AGL), Atmos Energy Corp. (ATO), Laclede Group Inc. (LG), New jersey Resources Corporation (NJR), Northwest Natural Gas Co. (NWN), Piedmont natural Gas (PNY), South Jersey Industries, Inc (SJI), Southwest Gas Corp (SWX and WGL Holdings, Inc (WGL).



The Arizona water utilities have both a lower average and wider spread than the natural gas sample.[12]

The above analyses clearly demonstrate that Arizona's Class A water utilities persistently under-earn relative to their authorized ROEs and relative to their peers in other states and industries. Additionally, the Arizona returns are not only on average lower than their out of state peers they are also more variable (i.e., they have a wider spread.) Technically, a wider spread means the distribution of Arizona returns has a higher standard deviation, i.e., higher risk. The standard deviation of the Arizona sample is 83% larger than that of the national water and gas utilities used by Staff and RUCO in their cost of equity analysis. The mean of the Arizona sample is 84% less than the national sample. Of course investors considering an equity investment in an Arizona water company take this into account. The historical record indicates that they can expect greater variability and lower average returns in the Arizona water utility industry than elsewhere.

Q. How do you explain the pervasive under-earning of Arizona's water utility industry?

[12] For Arizona utilities: the average ROE is 1.4% with a standard deviation of 0.060. For the sample of gas utilities the average ROE is 11.47% with a standard deviation of 0.027.

A. The water utility industry in Arizona faces many challenges. Some of those challenges are faced by the industry nation-wide but many result from circumstances in Arizona. Challenges that face the industry as a whole include the extremely capital intensive nature of the business coupled with the need for ongoing capital reinvestment and the enhancement of EPA regulations. In Arizona these challenges are exacerbated by development risk, the prevalence of old and dilapidated systems in some rural areas, revenue attrition due to conservation, and the regulatory environment.

Q. Can you expand on how the regulatory environment in Arizona makes it difficult for water utilities to earn their authorized ROEs?

A. Several regulatory factors serve to depress realized ROEs in Arizona: (1) the strict adherence to an historic test year coupled with rate case processing times that can take well over a year; (2) the use of rate structures explicitly designed to encourage conservation without adjustments to revenue requirements to account for conservation; (3) abnormally low authorized ROEs, as compared to other states; and (4) the relative small size of most Arizona water utilities. Note that I am not saying that a historical test year in and of itself is inherently bad, nor am I saying that conservation-based rate designs are bad. But the confluence of all these factors without some recognition in the ratemaking process results in severely depressed realized ROEs.

In common with utilities around the country many Arizona utilities (including Ray) face the need for significant re-investment in older distribution plant. Because of Arizona's strict adherence to the historical test year standard these re-investments face the same carrying cost problem as new utility investments: there is a significant lag between when the investments are made and when a return on and off the investments can begin. Some state utility commissions have addressed this problem using Distribution System Investment Charges (DSICs) that allow for returns to be earned on these re-investments without a full rate case.[13] Not only does Arizona (so far) not allow for a DSIC-like mechanism but the extremely long processing times for rate cases in Arizona further exacerbates these problems associated with the recognition of investments. This means that Arizona utilities are constantly playing catch up because when rates go into effect they represent a level of capital investment that's close to two years old.

The use of tiered rates is also contributing to the erosion of earnings among Arizona utilities. Tiered rates are specifically intended to reduce consumption, yet the Commission has not recognized that consumption may decline when it sets rates. While Ray does not currently have tiered rates it is proposing them in this case. Ray understands that tiered rates are preferred by the Staff and Commission. Additionally, Ray believes that water conservation is a laudable goal. However, the Commission should recognize that ignoring the revenue impact conservation greatly enhances the risk to utilities.

Finally, it is the case that utilities in Arizona are relatively small. Small size affects both the revenues and costs of utilities. Small utilities' revenues are far more susceptible to shocks resulting from customer conservation (or customer loss) than larger utilities. Consider the example of a large industrial user of water that decides to conserve and use less water. A large

[13] DSICs go by different names in different states and each state has implemented them slightly differently. According to the National Association of Water Companies California, Connecticut, Delaware, Illinois, Indiana, Missouri, New Hampshire, New Jersey, New York, Ohio and Pennsylvania each allow for DSIC like mechanisms, see: http://www.nawc.org/state-utility-regulation/regulatory-practices/distribution-system-investment-charge.aspx.

utility with a diverse customer base will be able to absorb that loss much more easily than a smaller utility that is far more dependent on each of its large users for revenue. On the cost side smaller utilities are much more susceptible to earnings erosion due to equipment failure than are larger utilities. Consider a pump failure for example. To a large utility operating multiple systems in multiple states a single pump failure is really a drop in the bucket and will have little impact on earnings. For a smaller utility, the same pump failure can have a much greater impact on earnings.

The Janney report discussed above cites some of these same issues as reasons why Arizona scored so low in Janney's utility rankings. The adherence to an historical test year, long rate case processing times, and the lack of a DSIC-like mechanism all contribute to a lower ranking under the methodology used in that report.

Q. What other sources can you point to to support your contention that the environment in Arizona is inherently unfavorable to the water utility industry?

A. Statements made in American States Water Company's 2010 annual report to its shareholders are telling:

> "Also unacceptable were the low historical returns on our investment in Chaparral City Water Company (CCWC), our Arizona subsidiary. In light of those returns, we did not have an interest in growing CCWC. We further concluded that given CCWC's small size, it made business sense to consider a sale. During the first six months of 2010, we implemented a sale process that resulted in our signing an agreement to sell CCWC to EPCOR Water (USA) Inc. for $35 million, including $29 million in cash and $6 million in assumed debt. ... We plan to use the cash from the sale to fund capital expenditures at GSWC, allowing us to defer one of our periodic AWR equity issuances."[14]

This quote demonstrates the effect of the ACC's decisions: private capital is fleeing the Arizona water utility industry. Rather than continuing to invest in Arizona, rational investors are seeking to shed their Arizona water utility investments. Similarly, American Water some time ago stopped supplying its Arizona subsidiary with equity capital[15] and has now sold that subsidiary.

Q. Please explain how the above factors are relevant to the issue of setting a forward looking cost of equity.

A. The above discussion clearly demonstrates that Arizona water utilities face a higher than typical level of risk. Specifically, the facts clearly show that Arizona water utilities are at great risk of not achieving their authorized ROE (since no Class A water utility in the state has managed to achieve its authorized ROE in the past five years.) This means that ROEs based on samples of non-Arizona utilities will understate the necessary ROE for an Arizona water utility. Thus ROE estimates that are developed through the use of a sample of non-Arizona utilities

[14] American States Water Company, 2010 Annual Report to Shareholders page 13. GSWC is Golden State Water Company, American States' California subsidiary.

[15] See Arizona American's most recent rate case application at pages 4-5 Docket No. W-01303A-10-0448.

(whether they are based on a comparative earnings analysis, a DCF analysis, a CAPM analysis or some other method) will need to be augmented upwards to reflect the circumstances in Arizona.

Q. Why does the state-wide history of low returns imply that Arizona water utilities face a higher cost of capital than is typical?

A. The expected return required to attract capital to an investment depends on that investment's perceived risk. The higher the risk the higher will be the expected return to attract sufficient capital.[16] A history of low and highly variable returns indicates that Arizona is a high risk environment for water utility equity investors. Equity investors will require relatively higher expected returns to invest in Arizona's industry which raises the cost of capital for Arizona's water utilities.

Q. Aren't water utilities typically considered to be low risk? How can a monopoly service provider be thought of as a high risk investment?

A. That is a legitimate and logical question. The wide-spread perception that water utilities are a low risk investment is based primarily on utility bonds which are typically highly rated. Utilities may present low risk to bond investors but that does not mean that equity investors face the same risk. Utility bond ratings are generally high because it is widely accepted that regulators will not allow a large utility to default on the obligations of its bonds. However, experience shows that no such protection is afforded equity holders. The above analysis demonstrates that this is especially true in Arizona. Equity investors face the real probability of earning a below normal return which inevitably leads to share price depreciation and a loss of capital (or to put it in terms of debt, a loss of principal.)

While water utilities are monopolies, the highly capital intensive nature of the water industry and the regulatory environment ensure that their monopoly status does not shield their equity investors from risk.

III. Ray's Current Financial Situation

Q. Turning now to Ray, what rate of return on equity did Ray achieved during the test year?

A. Ray's realized ROE in the test year (2011) was: -8.55%.

Q. In addition to the test year return on equity, can you provide additional details on Ray's financial situations?

A. Ray's last rate case was in 1999 (Decision No. 61610.) Since then Ray has only achieved the ROE authorized in that decision in one year (2000.) On average Ray's actual ROE since the last rate case was only 4.49%. The following table shows Ray's ROE for each year since its last rate case:

[16] This basic relationship between risk and return is fundamental to finance theory and practice. Markowitz, Harry M. "Portfolio Selection," The Journal of Finance, Vol. VII, March 1952, 77-91 provides an early exploration of the implications of the risk-return relationship.

Authorized ROE		11.00%
Year	Actual ROE	Difference from Authorized ROE
1999	8.75%	-2.25%
2000	14.05%	3.05%
2001	6.42%	-4.58%
2002	9.82%	-1.18%
2003	5.95%	-5.05%
2004	5.92%	-5.08%
2005	4.24%	-6.76%
2006	9.18%	-1.82%
2007	4.09%	-6.91%
2008	1.97%	-9.03%
2009	-1.21%	-12.21%
2010	-2.35%	-13.35%
2011	-8.55%	-19.55%

Ray's failure to achieve its authorized ROE in all but one of the last 13 years is telling. It indicates that Ray faces the same problems and issues that the Class A utilities I discussed above face. In fact, given Ray's relatively small size the issues and risks it faces are even more considerable than those faced by the larger utilities.

It is also noteworthy that Ray is not a spendthrift utility. In fact, it is especially cost effective. Ray's operating cost per customer compares very favorably with the Class A water utilities in Arizona I have evaluated on that basis. In spite of this high level of efficiency, Ray is still unable to achieve its authorized ROE.

IV. The Current Economic Situation's Impact on Required ROEs.

Q. There have been significant economic disruptions over the past several years. Please explain how the current economic situation impacts required returns on equity for Arizona water utilities.

A. In recent years we have experienced a historic deflation in real estate values, the most severe recession in generations, a government bailout of the financial industry, and a remarkable increase in the Federal Government's debt. The post-recession environment has been characterized by anemic economic growth, persistent high unemployment, a historic down-grading of US government debt and wild swings in equity prices. The Federal Reserve's policy known as quantitative easing was intended to increase economic growth by increasing the money supply, however the results have not been impressive as economic growth has been slow and the Fed's policy has stoked fears (if not the actuality) of excessive inflation. Additionally, a significant number of Americans still owe more on their home's mortgage than the home is

worth which creates both downward pressure on and uncertainty about the real estate market. More recently it has become apparent that certain European governments have accumulated an unsustainable debt load. A default by these governments could be disruptive to the global financial system and while European leaders have given assurances that a default will not happen they have been slow in developing a plan of action to comprehensively deal with the problem.

These factors have led to a remarkable level of risk and uncertainty for equity investors of all kinds. The real fear of capital losses has led investors to seek out low risk investments (such as US Government debt) which has driven their interest rates to historic lows, while at the same time driving the total returns on US Government debt to historic highs.

Because of their monopoly status, water utilities *could* be thought of as an island of safety in a sea of risk but this is certainly not the case in Arizona. As discussed in detail above, equity investors face substantial risks and uncertainty in the Arizona water utility industry.

In addition to the water utility specific issues already discussed, it is also the case that Arizona was (and is) in many ways at the epicenter of the real estate implosion. Arizona's economy has always been highly dependent on real estate development and that industry's collapse has hit Arizona (and its water utilities) hard. Additionally, in national rankings of foreclosed homes, underwater mortgages and vacant residences Arizona still persistently ranks high.[17] So the risk of further deterioration in Arizona's real estate market still haunts the state.

Given the twin threats of regulatory uncertainty and real estate uncertainty it is doubtful that equity investors would perceive Arizona's water utility industry to be a safe haven from risk.

Q. How has the macroeconomic situation affected cost of equity estimation more generally?

A. The excessive risk of recent years has sparked a "flight to safety" by investors. Seeking to avoid risk, investors have been buying US Government debt securities. The Federal Reserve also acquired large quantities of US Government debt as part of its Quantitative Easing policy. This increased demand for US Government bonds has driven the price of those bonds up which drives the yield (and interest rate) of the bonds down. In spite of the lower interest rates and yields the total return accruing to US Government bond holders has increased dramatically due to price appreciation.

This is an issue for cost of equity estimation because the return on US Government bonds is commonly used as the proxy for the risk-free rate of return component of the CAPM. It is questionable whether the depressed yields and inflated total returns associated with the flight to

[17] RealtyTrac, Q1 2012 Foreclosure Activity Lowest Since Q4 2007, April 5, 2012 (http://www.realtytrac.com/content/foreclosure-market-report/foreclosure-trends--q1-2012-and-march-2012-foreclosure-report-----realtytrac-7111) Quote: "Arizona's foreclosure rate was the nation's highest state foreclosure rate in March.";
NuWire Investor, Underwater Mortgages Belie housing Recovery, March 6, 2012 (http://www.nuwireinvestor.com/articles/underwater-mortgages-belie-housing-recovery-58847.aspx) Quote: "Statewise, Nevada had the highest negative equity rate, with 61% of homeowners underwater on their mortgages. Arizona, at 48%, and Florida, at 44%, ranked second and third in the CoreLogic ranking.";
US Census data available at http://www.census.gov/hhes/www/housing/hvs/rates/index.html show Arizona is ranked 4th nationally for vacant homes.

safety and Federal Reserve intervention are consistent with the theoretical framework of the CAPM. This issue will be discussed in greater detail below under the section on CAPM analysis.

V. ROE Estimation Based on the Comparable Earnings Approach

Q. Please describe the Comparable Earnings approach to estimating ROEs.

A. The Comparable Earnings approach is simple relative to other commonly used ROE estimation techniques. The Comparable Earnings approach involves selecting a sample of companies and calculating their actual or expected returns on equity. The sample returns on equity are averaged and used as a proxy for the required return on equity of the utility in question. In the interest of minimizing the amount of subjective inputs, the Comparable Earnings analysis presented here is based on the actual returns on equity achieved by the sample's utilities, not on earnings projections.

A. Comparable Earnings vs. DCF and CAPM

Q. How does the Comparable Earnings approach compare to more abstract methods such as the DCF model and CAPM?

A. A Comparable Earnings analysis based on actual returns requires no subjective judgments regarding financial algorithms, models or figures. The only subjective decision the analyst must make is the selection of the companies to include in the sample. In contrast, in order to apply the DCF or CAPM models several subjective determinations regarding financial variables must be made. With the DCF model the analyst must select the appropriate expected growth rate (or rates) of dividends. The analyst must pick a proxy for the expected growth rate because the expected dividend growth rate only really exists in the minds of investors, making its actual value unknowable. Similarly, with the CAPM the analysts must pick appropriate stand-ins for wholly theoretical variables. Appropriate proxies for the "risk free" rate of return, the market risk premium and the expected correlation between a given securities return and the market return must be selected by the analyst.

Q. What are the other merits of the Comparable Earnings approach?

A. Use of a Comparable Earnings analysis is consistent both with the legal and economic underpinnings of rate of return regulation. From an economic perspective the cost of capital is an opportunity cost, the foregone opportunities associated with making a particular investment. A Comparable Earnings approach produces the most straightforward calculation of the real opportunity cost faced by a potential utility investor. From a legal perspective the Comparable Earnings approach fits the concept of "corresponding risk" espoused by the seminal *Hope* and *Bluefield* US Supreme Court cases. The *Hope* and *Bluefield* cases are widely regarded as foundational to modern rate base rate of return regulation. The cases' assessment of cost of capital issues is best summarized in the following quote from *Hope*:

"From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard *the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks*. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital."[18]

The three cost of capital standards established by *Hope* and *Bluefield* are commensurate (i.e., comparable) earnings, financial integrity and capital attraction. A Comparable Earnings analysis of the cost of equity corresponds directly and literally with the commensurate earnings standard. The Comparable Earnings approach also satisfies the financial integrity standard since only companies characterized by a high degree of financial integrity should be included in the sample used to develop the cost of equity estimate. Because of the enhanced risk associated with operating a utility in Arizona (discussed above) a Comparable Earnings analysis (or any other type of analysis) based on a sample of companies with more normal risk profiles will have to be augmented upwards in order to satisfy the capital attraction standard.

Q. Do the DCF and CAPM models also conform to the standards laid out in Hope and Bluefield?

A. While the DCF and CAPM may not directly contradict the *Hope* and *Bluefield* standards they do not conform to the standards as directly as the Comparable Earnings approach does. Also, the amount of subjective determinations that must be made when formulating the DCF and CAPM models will always raise questions about the extent to which their results conform with the *Hope* and *Bluefield* standards.

Q. Is the Comparable Earnings method widely used?

A. I have not conducted a comprehensive review of the cost of equity methodologies used by the various state commissions. The most recent available review indicates that 21 state commissions and federal regulatory agencies favor the Comparable Earnings method and that 27 use a combination of different methods (which may or may not include the Comparable Earnings method.)[19]

However, there is considerable resistance to the Comparable Earnings approach. I believe this resistance is the result of Comparable Earnings' simplicity. Complex economic and financial models present an air of superiority and mystery. The practitioner who uses these models is privy to special truths that the layman is closed off from. Furthermore, regulators, companies and analysts like believing that their decisions are based on a Nobel Prize-winning

[18] Federal Power Commission et. al. v. Hope Natural Gas Company (320 U.S. 591), Emphasis added.
[19] NARUC Compilation of Utility Regulatory Policy 1994-1995, cited in The Cost of Capital, A Practitioners Guide David C. Parcell 2010 edition at 88.

model.[20] In contrast, the comparable earnings approach is not complex and does not require knowledge of esoteric financial theory.

I assume that for the average person and the average investor, as they read through cost of capital testimony they will recognize that they understand Comparable Earnings and are baffled by DCFs and CAPM. Being simple and reflective of reality, and understandable are all reasons for reliance on Comparable Earnings – but are also reasons why many experts spurn it.

B. Selection of Sample Utilities

Q. Please discuss how you selected the sample utilities to use in the Comparable Earnings analysis.

A. To select a sample I started with the samples recently used by ACC Staff's and RUCO's cost of capital analysts[21].

RUCO		STAFF	
American States	AWR	American States	AWR
California Water	CWT	California Water	CWT
Aqua American	WTR	Aqua American	WTR
Middlesex Water	MSEX	Middlesex Water	MSEX
SJW Corp	SJW	SJW Corp	SJW
AGL Resources, Inc.	GAS	Connecticut Water	CTWS
Atmos Energy Corp	ATO		
Laclede Group, inc.	LG		
New jersey Resources Corporation	NJR		
Northwest Natural Gas Co.	NWN		
Piedmont Natural Gas Company	PNY		
South Jersey Industries, Inc	SJI		
Southwest Gas Corporation	SWX		
WGL Holdings, Inc	WGL		

I then calculated the realized return on equity in 2011 for each of these companies. I removed the companies with both the highest and the lowest ROEs (SWX 4.51% and SJI 14.31%.) Removing the high and low observations from a sample prevents undue influence of extreme circumstances. I also excluded AGL Resources because of significant one-time expenses associated with its recent merger with Nicor. I have replaced AGL Resources with UGI Corporation, another natural gas utility. This provides the following sample of utilities:

American States	AWR
Aqua American	WTR

[20] Note that the developers of the CAPM did receive a Nobel Prize for their work but they developed the CAPM as a tool to develop optimal portfolio selection techniques, not as a tool for estimating the cost of equity. So the Nobel Prize really isn't an endorsement of the CAPM as it is used in utility ratemaking.

[21] See testimony of Staff and RUCO in Docket W-01445A-11-0310.

California Water	CWT
Connecticut Water	CTWS
Middlesex Water	MSEX
SJW Corp	SJW
York Water Co.	YORW
Atmos Energy Corp	ATO
Laclede Group, inc.	LG
New Jersey Resources Corporation	NJR
Northwest Natural Gas Co.	NWN
Piedmont Natural Gas Company	PNY
UGI CORP	UGI
WGL Holdings, inc	WGL

Q. Why is it appropriate to include natural gas distribution companies in the sample?

A. The natural gas distribution industry has many similarities to the water industry. Natural gas utilities are known to suffer from revenue attrition due to energy efficiency programs in much the same way that Arizona water utilities suffer from attrition resulting from conservation orientated rate designs. Also, the number of water utilities for which detailed financial information is available is limited, so inclusion of the natural gas utilities allows for a large sample which limits the impact that any one company's unusual circumstances can have.

Use of natural gas utilities as a stand in for water utilities is not unique to this testimony. As stated above RUCO commonly includes natural gas utilities in its sample. Also, the Florida Public Service Commission uses a sample of natural gas utilities in its annual generic ROE estimation for water utilities.[22]

C. Comparable Earnings Results

Q. What is the realized ROE for this sample?

A. Taking a weighted (by equity) average of the realized ROEs of each of the utilities in the sample produces an ROE of 10.47%. See Schedule MJR 1.

Q. Why is it appropriate to use a weighted average of the sample ROEs to produce the estimate of the cost of equity?

A. The utilities in the sample vary greatly in size. The smallest, York Water Co., has an equity balance of $95 million. The largest, Atmos Energy, has an equity balance of $2,255 million. Taking a simple average of returns produces a number that overstates the influence of the smaller utilities in the sample. Weighting the sample ROEs by the equity balance of each company produces the average return accruing to *each dollar* of equity in the sample.

[22] See Florida PSC Order No. PSC-11-0287-PAA-WS, Docket No. 110006-WS

VI. DCF estimation

Q. Please describe the DCF model.

A. The DCF or Discounted Cash Flow model is based on the idea that the present value of an asset that pays off in the future is the discounted expected value of the future pay off. This means that the price of a stock is:

$$P = \frac{D_1}{(1+r)} + \frac{D_2}{(1+r)^2} + \frac{D_3}{(1+r)^3} + \frac{D_4}{(1+r)^4} + \cdots$$

Where P is the stock price, D_1 is the dividend paid in future year one, D_2 is the dividend paid in future year two, D_3 is the dividend paid in future year three etc., (1 + r) is the discount rate and r is the rate of return.

Assuming that dividends grow at a constant rate of g and that the future stream of dividends is infinite allows the above equation to be rewritten as:

$$P = \frac{D_0}{(r-g)}$$

Where D_0 is the current dividend being paid.

Solving this equation for r gives the standard formulation of the DCF model:

$$r = \frac{D_0}{P} + g$$

The required rate of return equals the current dividend yield plus the expected growth rate.

While the mathematics that connect the above steps may not be intuitively obvious, this basic relationship between stock price, dividend yield and the growth rate is regarded as a truism of finance.

The dividend yield of a stock is readily attainable from a variety of sources. However, the expected growth rate is not known with certainty and a proxy for it must be selected.

Q. Please describe your specific formulation of the DCF model.

A. Using the DCF model I calculated the required ROEs of each of the utilities in the sample (this is the same sample of companies presented in the Comparable Earnings analysis above.) These ROEs were than averaged to come up with a DCF ROE estimate.

The simple DCF formula discussed in the previous question is known as the Continuous DCF model because its formulation requires the implicit assumption that dividends are paid in a continuous stream throughout the year. To account for the real world complication that dividends are paid out at discrete intervals I use the Annual Compounding DCF model:

$$r = \frac{D_0(1+g)}{P} + g$$

Q. How did you calculate the dividend yield for the companies in the sample?

A. For each of the sample companies I used the dividend per share for 2012 from Value Line's April 20, 2012 Summary and Index for D_0. And I used the closing price of the sample

companies' stock from May 30, 2012 (obtained from Google Finance) for the current price. The calculation of the dividend yield is shown on Schedule MJR 2. This is the same method of calculating the dividend yield used by the ACC Staff in recent water utility cases.[23]

Q. How did you calculate the expected dividend growth rate?

A. I obtained analysts' projections of the sample companies' Earnings Per Share ("EPS") growth rates. I then averaged these projections together to get a proxy for the expected growth rate in dividends. The sources I used to obtain analysts forecasts are: Yahoo Finance, Reuters, Zacks, CNN Money and Value Line. Averaging the forecasts from five different sources prevents any one anomalous forecast from having substantial influence on the result. Schedule MJR 3 shows the calculation of the expected dividend growth rate.

Q. Why do you believe it is appropriate to use forecasts of EPS as a proxy for expected dividend growth?

A. The value g in the DCF model is defined as the *expected future* growth rate. It is not the current or historical growth rate, but the growth rate investors expect to experience in the future. Analysts' forecasts are the best proxy we have for the expected future growth rate of a given company. Historical growth rates do provide relevant information and analysts do include historical growth rates in their assessment of future growth rates. So relying on forecasted growth rates does not mean that historical growth rates are ignored.

Since forecasts of dividend growth are not widely available, forecasts of earnings per share growth rates are often used in the DCF model.[24] The DCF model relies on the implicit assumption that earnings and dividends grow at the same rate[25] so when using the DCF model EPS growth rates are an appropriate proxy for dividend growth rates.

Q. Please discuss the multi-stage DCF model.

A. In addition to the annual compounding and DCF model discussed above I also developed a cost of equity estimate using the multi-stage DCF model. The multi-stage DCF model allows for non-constant growth rates in dividends. I have used the same formulation of the multi-stage DCF that Staff has used in recent cases.[26]

The idea behind the multi-stage DCF is that the assumption in the standard DCF that dividends grow at a constant rate forever is thought to be unrealistic. The multi-stage DCF requires the assumption that dividends are expected to grow at one rate over the near term and at a different long run sustainable rate over the long term. The multi-stage DCF equation is:

$$P_0 = \sum_{t=1}^{n} \frac{D_t}{(1+r)^t} + \frac{D_n(1+g_n)}{r-g_n}\left[\frac{1}{(1+r)}\right]^n$$

Where: $P_0 = current\ stock\ price$

[23] See W-01303A-10-0448, Arizona American rate case, Direct Testimony of Juan Manrique.
[24] Morin, Roger A, New Regulatory Finance, Public Utility Reports, inc 2006, at page 302
[25] Ibid, at page 258.
[26] See W-01303A-10-0448, Arizona American rate case, Direct Testimony of Juan Manrique.

D_t = *dividends expected durring the initial near term period*

r = *cost of equity*

n = *number of years in the initial near term period*

D_n = *dividends expected in year n*

g_n = *constant rate of growth expected after year n*

Solving the multi-stage DCF equation for r cannot be done algebraically; rather values for r must be plugged in iteratively until the value that solves the equation is reached. Schedule MJR 4 shows the derivation of the multistage DCF results.

Following Staff I use a near term period of five years and I use the long run average of U.S. GDP growth of 6.6% as the long term growth rate, g_n.[27] For the short term growth rate I use the same growth rate discussed above under the annual and semi-annual compounding DCF models.

The multi-stage DCF model is used extensively by financial analysts and institutional investors.[28] Because of this widespread acceptance of the multi-stage DCF model and because it has been employed by the Staff it seemed appropriate to include it in the DCF analysis of utility costs of equity.

Q. Both ACC Staff and RUCO use the Sustainable Growth method to develop a growth rate for their DCF models. Why are you not proposing to use the Sustainable Growth method?

A. The Sustainable Growth (or Retention Ratio) method formulates the expected dividend growth rate as:

$g = b * r + s * v$

Where: b = the expected fraction of earnings to be retained by the company

r = the expected return on equity

s = the expected growth in the company's outstanding shares

v = the expected fraction of sales of new stock that accrues to current share holders.

So use of the Sustainable Growth method requires the analyst to develop proxies for four different expectational variables. Determining what proxies are appropriate for investors' expectations of b, r, s and v is inherently more problematic than determining a proxy for the single variable g.

The variable r, the expected return on equity, raises additional issues. Investors' expectations about the future actual ROE will depend on their expectations regarding the outcome of regulatory proceedings that set the authorized ROE. So the idea that r, the expected return on equity, can be used as an input to determine the authorized ROE is inherently circular. Historical actual ROEs have been used as a proxy for expected ROEs but if we believe that historical actual ROEs are an appropriate proxy for expected ROEs we can just use the historical

[27] Ibid.

[28] Morin, New Regulatory Finance at 266.

actual ROEs to compute the authorized ROE directly without the use of the DCF or any other model (which is what I did in the Comparable Earnings analysis above.)

Q. Please discuss the assumptions that the DCF model relies on.

A. Like all models the DCF is a simplification of reality. In order to make financial models practical for actual use simplifying assumptions must be made about the behavior and beliefs of investors and company management. The following are assumptions that the DCF relies on. The first four assumptions are necessary for any DCF model while the last four are necessary only for constant growth DCF models.[29]

Assumption 1: Investors value stocks in the classical economic framework, i.e., they make investment decisions in a rational fashion based on their perception of value.

Assumption 2: Investors discount future dividends at the same rate (1 + the cost of equity) in each future period. This implies that investors assume that the yield curve is flat (i.e., that interest rates on short term, intermediate term and long term debt are the same.) While this assumption is unrealistic its practical implications are limited.

Assumption 3: The cost of equity derived from the DCF model corresponds to the specific stream of future cash flows included in the model. In other words, it is dependent on the specific circumstances of the company whose data is being used in the model. If investors expected the same cash flows but with a higher level of risk the resulting cost of equity would not be the same. This is because the stock price will decline if perceived risk increases (even if expected cash flows don't change.) In the context of the DCF model a lower stock price results in a higher cost of equity. This supports the notion that the DCF cost of equity results should be adjusted upwards to account for the specific risks faced by Ray (and other Arizona water utilities.)

Assumption 4: The source of value to investors is dividends.

Assumption 5: The cost of equity must be greater than the expected growth rate of dividends. This means that the DCF model cannot be used for growth stocks but it is not an issue for most utilities.

Assumption 6: The expected dividend growth rate is constant for every future year to infinity. This does not mean that dividends must actually grow at the same rate every year. Rather, investors are assumed to expect the growth rate to be constant. If the actual growth rate varies randomly around an average expected rate this assumption is not violated.

Assumption 7: Investors require the same return on equity in each future year. This implies that the risks faced by the firm are assumed to be constant.

Assumption 8: There is no external financing. Dividend growth comes solely from the retention of earnings.

Q. What are the results of your DCF analysis?

A. The results of the DCF analysis presented here are:

[29] This discussion of DCF assumptions follows Morin, 2006, 251-258.

DCF Method	ROE
DCF Annual Compounding	9.16%
Multistage DCF	9.81%

VI. CAPM estimation

Q. Please discuss the CAPM or Capital Asset Pricing Model.

A. The CAPM is quite different from the DCF model. The DCF model is a multi-period model that explicitly recognizes that investment returns are paid out over time. In stark contrast, the CAPM is a single period model; it is essentially an instantaneous snapshot of a moment in time and thus it eschews the concept of the time value of money and of discount rates. Further, while the DCF model explicitly recognizes that the cost of equity depends upon firm specific factors such as a firm's dividend yield and expected dividend growth rate, the CAPM assumes that investors ignore all such firm specific factors. Unlike the DCF model which is grounded by the "old school" financial concept that the value of an asset is the discounted sum of future cash flows,[30] the CAPM is based on the more recent theory of Efficient Markets and Modern Portfolio Theory.[31]

Q. What is the basic formulation of the CAPM?

A. The CAPM specifies the relationship between the cost of equity, the "risk free" rate of return, beta and the market risk premium. This relationship is expressed as:

$$r = RF + \beta * (RM - RF)$$

Where: r = the cost of equity

RF = The "risk free" rate of return

β = Beta, the expected correlation between a given securities return and the market rate of return.

RM = the market rate of return

RM – RF = the market risk premium.

The risk free rate of return, RF, is the hypothetical return on the hypothetical risk free asset. In reality, no asset is risk free so an appropriate proxy for the risk free rate must be selected by the analyst.

Beta measures a given asset's propensity to move with the "market." A Beta of 1 indicates that the asset tends to move in perfect correlation with the market. A Beta of 0.5 indicates the asset tends to move half as much as the market.[32]

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[30] First advanced by Fisher (1907) and expanded on by Williams (1938.)

[31] Markowitz (1952), Sharpe (1963) and Lintner (1965)

[32] I say "tends to" because Betas are determined statistically through a regression model. The statistical model used to estimate Beta is:

Historical betas are determined by the use of a statistical model known as regression analysis that determines the correlation between a given assets' return and the market return. Historical betas are often used as a proxy for expected betas when formulating the CAPM.

The market rate of return, RM, is supposed to represent the return on a hypothetical portfolio consisting of **all assets.** In theory this portfolio would consist of all conceivable asset classes: stocks, bonds, agricultural commodities, gold and other metals, art, collectables, etc. However, in practice the market portfolio is usually represented by a broad portfolio of stocks. This difference between the theoretical CAPM and how it is used in practice has been cited as one of the CAPM's fundamental drawbacks.[33]

The market risk premium, RM – RF, is the difference between the market return and the risk free rate of return. It represents the additional return required to compensate investors for the risk associated with holding the market portfolio rather than the risk free asset. This factor explains why investors choose the risk inherent in the market rather than risk free investments: they expect to earn more money.

Q. How have current events made use of the CAPM problematic?

A. In 2011 both long term and intermediate term US government bonds outperformed stocks in terms of return.

2011 Returns to Various Asset Classes[34]

	Capital Appreciation	Income Return	Reinvestment Return	Total Return
Large Company Stocks	0%	2.13%	-0.01%	2.11%
Long-Term US Gov. Bonds	23.74%	3.81%	0.68%	28.23%
Intermediate Term US Gov. Bonds	7.79%	1.58%	0.09%	9.46%

So the premium of large company stocks as compared to long and medium term government bonds was actually *negative* in 2011.

The premium of large company stock returns over short-term US government debt (treasuries) is currently at historic lows and has been highly variable over the past several years. Since 2006 this "equity risk premium" has been as high as 26.34% and as low as -37.99%.

Year	Large Company Stock Premium to Treasuries (Equity Risk Premium)[35]

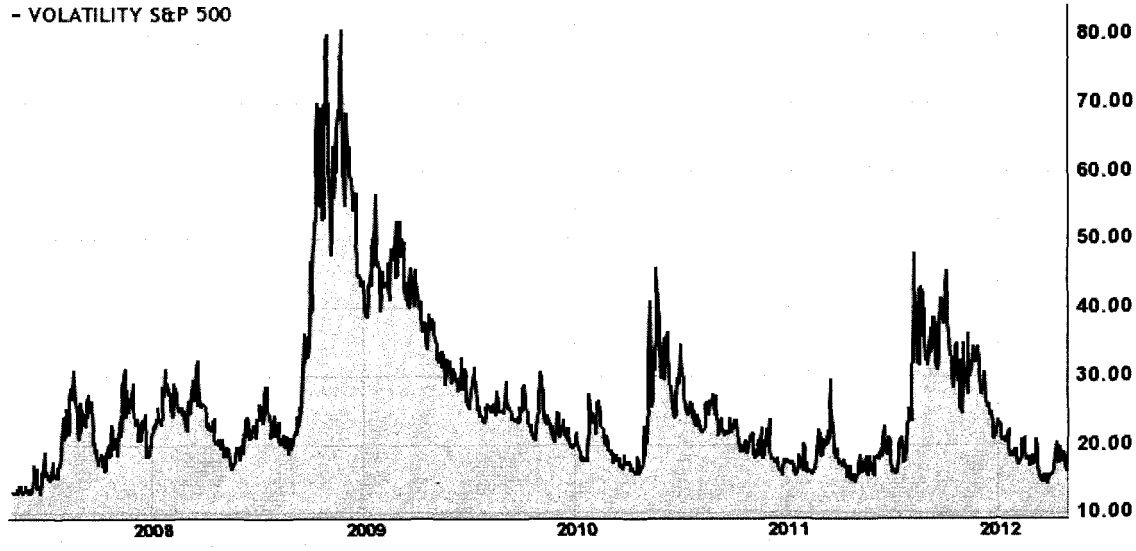
$r = RF + \beta * (RM - RF) + \varepsilon$ where ε is a random error term. I.e., the CAPM does not explain all of the variability in r.

[33] Morin, New Regulatory Finance at 176.

[34] Source: Morningstar 2012 Classic Yearbook Table 2-2.

2006	10.49
2007	0.79
2008	-37.99
2009	26.34
2010	14.92
2011	2.07

This extreme volatility was mirrored in the Chicago Board of Exchange (CBOE) Volatility Index (VIX):



This obvious high variability in the markets and in risk premiums reflects the dramatic swings in the stock market over the past few years. In 2008 when the market crashed the risk "premium" was highly negative. As often happens after a crash the market recovered over the next few years and so did the premium. In 2011 the stock market leveled off and the bond market did remarkably well.

The premium of large company stock returns over the various types of US government debt is used as a proxy for the market risk premium when using the CAPM. Given that these premiums are anomalously low and subject to high degrees of variation due to the unsettled nature of current economic conditions, their use in the CAPM is problematic. A CAPM model based on the 2010 equity risk premium (14.92%) will result in a drastically different ROE than one based on 2011's risk premium (2.07%.) But does anyone really believe that the cost of equity faced by utilities in Arizona shifted that drastically from 2010 to 2011?

Additionally, the recent variability in the stock market has caused a "flight to safety" which, along with actions by the Federal Reserve, reduces interest rates but at the same time increase total returns to bond holders. This tends to artificially depress results of the CAPM since many analysts use the *interest rate* on government bonds as the proxy for the risk free rate

[35] Source: Morningstar 2012 Classic Yearbook Table 4-1.

but use a market risk premium based on the difference between *total returns* of stocks and bonds. This mismatch has resulted in remarkably low CAPM ROE estimates in resent Staff and RUCO testimony.[36]

Q. Do you see any other issues with the CAPM?

A. The assets used as inputs into the CAPM, stocks and government bonds, are highly liquid. They can be easily bought and sold on short notice and offer the chance at a capital gain. However, the asset class we are interested in, water utility plant, is not at all liquid and has almost no chance of providing a capital gain. This significant difference in the assets used as inputs into the model and actual utility assets calls into question its applicability for the estimation of utility ROE.

Q. How do you recommend that these problems with the CAPM be addressed?

A. My primary recommendation is that the CAPM be abandoned entirely by the ACC, at least under the current, unusual economic situation. Relying primarily on the comparable earnings approach and using the DCF as a check would be superior to the current practice of using the CAPM. Notably, the ACC only began routinely using the CAPM in the last ten years. However, if I were to not put forth a CAPM model in this testimony I may be subject to unwarranted criticism. So, in order to alleviate the problem associated with current anomalous market conditions, I have developed CAPM models based on long term averages.

A. Choice of Risk Free Rate, Market Risk Premium and Betas

Q. How has the choice of the risk free rate of return, market risk premium and Beta been handled in recent testimony presented before the ACC?

A. I have examined testimony filed by Staff, RUCO and company witnesses in the most recent Arizona Water and Arizona American rate cases.[37] For the risk free rate of return these witnesses proposed 8 different estimates ranging from 0.83% to 5.17%. For the market risk premium there were 9 different estimates ranging from 4.5% to 11.9%. For Beta there were 6 different estimates ranging from 0.67 to 0.76.

Between the December 5, 2011 filing in the Arizona American case and the March 13, 2012 filing in the Arizona Water case Staff's estimate of the "historical" risk free rate of return declined by 50% with no change in the market risk premium. RUCO's estimate of the risk free rate of return declined by 56% over the same three-month period.

This high degree of variability calls into question the validity and practical applicability of the CAPM method. It also leads to the unanswerable question: How can an asset whose return can decline over 50% over three months be considered to be "risk free"?

Q. Please discuss your general approach to the CAPM?

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[36] See W-01445A-10-0517.
[37] W-01445A-11-0310 and W-01303A-10-0448.

A. I have developed separate CAPM estimates based on the annual returns and market risk premium to long term, medium term and short term government bonds. Morningstar publishes returns accruing to these assets over various time periods. To match the typical life of utility assets I use returns accruing over the past 30 years.

Q. What proxy did you use for the risk free rate of return?

A. I used the average return on long term, medium term and short term US government bonds over the period January 1, 1980 to December 31, 2011 reported by Morningstar in their 2012 SBBI Classic Yearbook[38] as the proxy for the risk free rate of return.

Q. Why do you believe long term returns are the appropriate proxy for the risk free rate?

A. Since the CAPM is a single period model there is no theoretically "right" answer to questions dealing with the choice of long term vs. short term proxies. Instead the choice must depend on real world considerations. Since an investment in utility plant is a long term investment, the corresponding risk free asset must also be of a long term duration. The return on an asset held for a short duration is not directly comparable to a return on an asset that must be held for 30 years. An equity investment in utility plant (i.e., ratebase) generally takes 30 years to be returned to the investor through depreciation (assuming that cash flow is high enough to make approved depreciation rates meaningful.) In order for the proxy risk free rate to appropriately correspond to the holding period of utility assets it must have a similar holding period.

Q. Have other practitioners used long term returns as a proxy for the risk free rate?

A. Yes. In recent cases both Staff and RUCO use long term total returns on government debt as a proxy for the risk free rate in their calculation of the market risk premium.[39]

Q. How did you pick the betas used in your CAPM analysis?

A. I used the same sample of utilities discussed in the Comparable Earnings and DCF analyses above. For each of these companies I obtained Value Line's estimated beta. The beta used in my CAPM analysis is the average of this sample of betas: 0.69. See Schedule MJR 6.

Q. Generally speaking why is it appropriate to use the average of a sample of beta estimates instead of a single beta estimate?

A. The statistical estimates of beta are just that: estimates. Like all statistical estimates they are prone to estimation errors. The CAPM was developed in the context of Portfolio Theory, a

[38] Tables C-4, C-5 an C-6

39 See dockets W-01303A-10-0448 and W-01445A-11-0310

branch of finance concerned with optimal portfolio allocations. The statistical errors of individual beta estimates of securities in a portfolio should cancel each other out such that the overall portfolio beta estimate is consistent and reliable. The developers of the CAPM were able to ignore the statistical error of individual beta estimates because their focus was the overall beta of the portfolio, not the individual betas. Now that we are using the CAPM to estimate the cost of equity for utilities (a use the CAPM was not intended for when it was developed) we must be aware of the statistical error problem and should use a sample of beta estimates from different firms in order to alleviate it.

Q. How did you develop the market risk premium (RM – RF) used in your CAPM analysis?

A. I calculated the premium of both large and small stocks over long term US Government bonds over the 1980 – 2011 period. The average return on large and small stocks over the 1980 to 2011 period was taken from Morningstar's 2012 SBBI Classic Yearbook[40]

Q. Why do you believe it is appropriate to include returns on small stocks in your calculation of the market risk premium?

A. The market return in the CAPM is the return on a hypothetical portfolio containing **all** asset classes. Thus, in order to be consistent with the theoretical underpinnings of the CAPM a broad array of asset classes should be represented in the market risk premium. Further, Ray is a small company itself and thus to be consistent with the comparable earnings standard established by *Hope* and *Bluefield* small companies should also be considered in determining the market risk premium.

B. CAPM Results

Q. Please discuss the results of your CAPM analysis.

A. The above describe method yields an ROE of 10.51%. Schedule MJR 5 shows the details of this calculation.

VII. Comparing Ray to the Sample Utilities

Q. How does Ray compare to the sample of utilities used in the above analyses?

A. Ray is considerably smaller than the utilities in the sample and faces considerably greater risk as a result of the economic, environmental, and regulatory environment in Arizona. I provide further information later in this section regarding why it is essential to consider firm-specific risks in determining the cost of equity.

A. Ray is significantly smaller than the sample utilities

Q. How much smaller is Ray compared to the sample utilities?

[40] Tables C-1, C-2 and C-3.

A. I compared the 2010 annual revenue and total assets of Ray to those of the sample utilities. The average of the sample utilities' 2010 revenues was: $1.6 Billion. The average of the sample utilities' 2010 total asset base was: $3.6 Billion. Ray is not even close in size to the sample average. Ray's revenues and assets are both well less than 0.5% of those of the sample.

Q. What are the implications of Ray's small size relative to the sample of utilities used to determine the cost of equity?

A. Ray's small size relative to the sample utilities calls into question whether the use of such a sample conforms to the "corresponding risk" standard derived from the *Hope* and *Bluefield* cases. The risk profile of small firms is fundamentally different from that of large firms. Small firms are widely regarded as riskier than large firms. Therefore, reliance on a sample of large firms can dramatically understate the risk (and the necessary cost of equity) for smaller utilities. In order to conform to *Hope* and *Bluefield's* "corresponding risk" standard an upward adjustment to the cost of equity derived from the sample utilities is necessary.

Q. Why is it that small utilities are characterized by higher risk than large utilities?

A. Lack of diversification is the primary reason why small utilities carry more risk than the utilities included in the sample. The utilities in the sample (for the most part) do business in multiple states and service territories. The effects of a disruption in any one service territory such as the loss of a large customer, the need for emergency repairs or an unfavorable regulatory decision are muted at the corporate level because they are spread out across the entire operation. This is not true of Ray, its relatively small size and lack of geographic scope precludes risk mitigation through diversification of their operations.

B. Ray faces substantially more risk than the sample utilities

Q. How do you support the contention that Ray faces substantially more risk than the sample utilities?

A. Section II, above, demonstrates that the actual return on equity experienced by utilities in Arizona is significantly below that and more variable than those in the sample. This makes it indisputable that Arizona based water utilities exhibit a higher risk profile than the utilities used in the sample. For technical reasons use of a sample of utilities is necessary in order to implement the traditional cost of equity estimation techniques, but this does not mean that problems associated with the sample should be ignored. In order to establish an authorized return on equity that appropriately addresses the difference in risk between Ray and the sample utilities a premium must be applied.

Q. How do you respond to Staff's contention that premiums associated with firm-specific risk are inappropriate because such risk can be diversified away[41]?

[41] See Docket W-01445A-11-0310.

A. The idea that firm-specific risk factors can be ignored is a result of the CAPM not a general principle of finance.

The CAPM's assumption that investors ignore firm-specific information such as dividends is, of course, absurd. A veritable cornucopia of firm-specific data is available to, and utilized by, today's investors. A whole industry is now supported by investors' demand for firm-specific data. Firms such as Value Line, Reuters, Dow Jones and others make their livings by providing firm-specific information to investors. It absolutely defies common sense that investors would pay for this firm-specific data if they did not intend to use it.

The absurdity of the CAPM's assumptions does not mean it is not useful. The CAPM provides a simple and widely accepted method for estimating the cost of equity. While unrealistic assumptions may be appropriate for a mathematical financial model, they are not appropriate for decision making in the real world. CAPM results can be used as an input when determining the authorized return on equity, using the CAPM's absurdly unrealistic assumptions to argue that firm-specific risk factors must be ignored entirely when determining the authorized return on equity for a specific firm is totally inappropriate. In other words, use of the CAPM does not preclude adjustments to the estimated cost of equity based on real world firm-specific risk factors.

In fact, adherence to the notion that firm-specific risk factors should be ignored when estimating the cost of equity seems to be a clear violation of the principles laid out in the *Hope* and *Bluefield* Supreme Court cases. As discussed above, the three cost of capital standards established by *Hope* and *Bluefield* are: 1) commensurate earnings; 2) financial integrity; and 3) capital attraction.

Ignoring firm specific risk factors violates all three of these standards.

1) The commensurate earnings standard requires that the cost of equity commensurate with that of other companies *with similar risk.* This is impossible if the risk characteristics of the utility in questions are ignored.
2) The financial integrity standard requires that the cost of equity be sufficient to maintain the financial integrity of the utility (the actual utility, not a generic utility). Again, this is impossible to assess if firm-specific factors are ignored.
3) Similarly, it is impossible to determine whether a given return on equity for a specific firm is sufficient to attract capital without also considering that firm's specific factors.

Q. What premium do you propose because of the risk factors that affect Arizona utilities?

A. Unfortunately, there is no accepted method for determining an appropriate rate of return premium to apply in instances such as this. However, a look at long term stock returns offers some guidance. Morningstar calculates and reports returns over various time periods for several different asset classes. Comparing returns on small stocks to those on large stocks over the period from 1926 through 2010 reveals that small stocks on average have returns 480 basis points higher than large stocks.[42] Given this large return premium that accrues to small companies in general, it is not unreasonable to suggest a similar premium to account for the extreme difference in size between Ray and the sample utilities as well as the difference in risk

[42] Morningstar June 2011 SBBI Market Report, Table 5.

characteristics of Arizona utilities compared to the sample utilities (discussed above.) However, in the interest of keeping the rate increase requested in this case moderate Ray is requesting a premium of only 65 basis points to account for these risk factors.

VIII. Authorized ROE

Q. What authorized ROE are you recommending for Ray?

A. To develop the recommended ROE I have used the weighted average of two different DCF models, 3 different CAPM models. and a comparable earnings analysis and developed justification for a 65 basis point premium. I believe the comparable earnings approach has more value than either the DCF or CAPM and thus I weight it more heavily in the recommendation. The comparable earnings result is weighted 2/3rds and the DCF and CAPM results are given a weight of 1/3. I then apply a 65 basis point premium as discussed above. This produces a recommended ROE of 10.91%. This process is summarized in the following table:

DCF Annual Compounding	9.16%
Multistage DCF	9.81%
CAPM	10.51%
Average of Models	9.83%
Comp Earnings	10.47%
Weighted Average (1/3 models, 2/3 Comp Earnings)	10.26%
Risk Premium	0.65%
Total	10.91%

VIII. WACC

Q. What is the weighted average cost of capital ("WACC"?)

A. The WACC is a cost of capital for the whole firm that is derived by weighting the cost of capital associated with each source of capital (debt and equity) by its share in the firm's overall capital structure.

Q. Please describe Ray's capital structure.

A. Ray currently has long term debt obligations of $100,000 and an equity balance of $1,058,077. The interest rate on Ray's current debt is 6.25%. In the first year that new rates will be in effect, Ray's debt balance is expected to fall to $84,653.

Q. What WACC are you recommending for Ray?

A. Weighting the recommending cost of equity and actual cost of debt by their proportions in Ray's capital structure yields a weighted average cost of capital of 10.56%.

Schedules:

Schedule MJR 1: Calculation of Comparable Earnings ROE

Company		Net Income (millions)	Equity (millions)	ROE	Equity Weight	Weighted ROE
American States	AWR	45.86	408.67	11.22%	0.03619	0.00406
Aqua American	WTR	143.07	1251.31	11.43%	0.11080	0.01267
California Water	CWT	37.71	449.83	8.38%	0.03983	0.00334
Connecticut Water	CTWS	11.3	118.96	9.50%	0.01053	0.00100
Middlesex Water	MSEX	13.45	180.33	7.46%	0.01597	0.00119
SJW Corp	SJW	20.88	264	7.91%	0.02338	0.00185
York Water Co.	YORW	9.08	95.27	9.53%	0.00844	0.00080
Atmos Energy Corp	ATO	207.6	2255.42	9.20%	0.19971	0.01838
Laclede Group, inc.	LG	63.83	573.33	11.13%	0.05077	0.00565
New jersey Resources Corporation	NJR	101.3	776.26	13.05%	0.06874	0.00897
Northwest Natural Gas Co.	NWN	63.9	714.49	8.94%	0.06327	0.00566
Piedmont Natural Gas Company	PNY	113.57	996.92	11.39%	0.08827	0.01006
UGI CORP	UGI	232.9	1977.7	11.78%	0.17512	0.02062
WGL Holdings, inc	WGL	118.37	1230.89	9.62%	0.10899	0.01048
						10.47%

Schedule MJR 2: Dividend Yield Calculation

			5/30/12	Dividend
		Do current*	Spot Price	Yield
American States	AWR	1.16	36.53	3.18%
Aqua American	WTR	0.67	23	2.91%
California Water	CWT	0.64	17.31	3.70%
Connecticut Water	CTWS	0.94	27.23	3.45%
Middlesex Water	MSEX	0.74	18.13	4.08%
SJW Corp	SJW	0.74	23.02	3.21%
York Water Co.	YORW	0.53	17.05	3.11%
Artesian Res. Corp.	ARTNA	0.76	18.75	4.05%
Atmos Energy Corp	ATO	1.38	32.52	4.24%
Laclede Group, inc.	LG	1.65	37.73	4.37%
New Jersey Resources Corporation	NJR	1.52	41.8	3.64%
Northwest Natural Gas Co.	NWN	1.78	45.93	3.88%
Piedmont Natural Gas Company	PNY	1.19	29.67	4.01%
UGI CORP	UGI	1.06	28.34	3.74%
WGL Holdings, inc	WGL	1.59	38.43	4.14%
*Value line Estimated Div next 12 months published 4/20/2012				

Schedule MJR 3: Calculation of Expected Dividend Growth Rate

		5/30/2012	5/30/2012	5/30/2012	5/30/2012		
		Yahoo Finance*,	Reuters*,	Zacks*,	CNN Money	Value Line*,‡	Average
American States	AWR	5.70%	7.57%	12.00%	4.00%	6.50%	6.59%
Aqua American	WTR	6.73%	7.48%	8.30%	7.00%	8.50%	7.85%
California Water	CWT	7.40%	7.40%	0.00%	8.05%	6.00%	11.16%
Connecticut Water	CTWS	6.10%	7.05%	0.00%	3.00%	0.00%	4.93%
Middlesex Water	MSEX	2.70%	-1.15%	No data	0.60%	5.50%	5.86%
SJW Corp	SJW	14.00%	14.00%	No data	12.60%	7.00%	6.91%
York Water Co.	YORW	4.90%	5.63%	No data	6.00%	0.00%	6.21%
Artesian Res. Corp.	ARTNA	4.40%	4.93%	No data	5.10%	-17.00%	9.21%
Atmos Energy Corp	ATO	4.37%	5.37%	4.80%	5.45%	4.00%	4.06%
Laclede Group, inc.	LG	5.30%	5.15%	3.50%	3.50%	2.00%	3.86%
New jersey Resources Corporation	NJR	2.47%	3.10%	3.80%	1.65%	5.50%	4.14%
Northwest Natural Gas Co.	NWN	3.25%	4.17%	4.30%	3.75%	4.00%	3.93%
Piedmont Natural Gas Company	PNY	4.55%	4.55%	4.70%	5.10%	2.50%	3.62%
UGI CORP	UGI	0.20%	0.20%	No data	0.20%	4.50%	1.63%
WGL Holdings, inc	WGL	4.60%	4.60%	4.90%	2.10%	3.00%	3.55%
		5.11%	**5.34%**	**4.63%**	**4.54%**	**2.80%**	**5.57%**

* Projected annual growth over next five years.

† Collected 4/16/2012.

‡ April 30 2012 Value Line for water and March 9, 2012 for Gas utilities.

Schedule MJR 4: Multistage DCF $P0 = \text{sum } Dt/(1+K)t + Dn(1+gn)/(K-gn) * [1/(1+K)]n$

	Do	Spot Price	K	Near Term Growth Rate	D1/(1+K)	D2/(1+K)2	D3/(1+K)3	D4/(1+K)4	D5/(1+K)5	sum Dt/(1+K)t	gn	Dn	Dn(1+gn)/(K-gn) * [1/(1+K)]n	Multistage DCF
AWR	1.16	[redacted]	9.63%	0.07	0.03	0.03	0.03	0.03	0.03	14.8%	0.07	1.64	36.38	36.53
WTR	0.67	[redacted]	9.47%	0.08	0.03	0.03	0.03	0.03	0.03	13.8%	0.07	0.97	22.86	23.00
CWT	0.64	[redacted]	10.09%	0.07	0.04	0.04	0.03	0.03	0.03	17.1%	0.07	0.91	17.14	17.31
CTWS	0.94	[redacted]	9.64%	0.05	0.03	0.03	0.03	0.03	0.03	15.4%	0.07	1.22	27.08	27.23
MSEX	0.74	[redacted]	9.78%	0.03	0.04	0.04	0.03	0.03	0.03	16.9%	0.07	0.86	17.96	18.13
SJW	0.74	[redacted]	10.31%	0.12	0.03	0.03	0.03	0.03	0.03	16.8%	0.07	1.30	22.85	23.02
YORW	0.53	[redacted]	9.39%	0.06	0.03	0.03	0.03	0.03	0.03	14.0%	0.07	0.69	16.91	17.05
ARTNA	0.76	[redacted]	10.02%	0.05	0.04	0.04	0.04	0.03	0.03	17.6%	0.07	0.96	18.57	18.75
ATO	1.38	[redacted]	10.15%	0.05	0.04	0.04	0.04	0.03	0.03	18.3%	0.07	1.74	32.34	32.52
LG	1.65	[redacted]	10.10%	0.04	0.04	0.04	0.04	0.03	0.03	18.4%	0.07	2.00	37.55	37.73
NJR	1.52	[redacted]	9.51%	0.03	0.03	0.03	0.03	0.03	0.03	15.3%	0.07	1.79	41.65	41.80
NWN	1.78	[redacted]	9.88%	0.05	0.04	0.04	0.03	0.03	0.03	16.9%	0.07	2.26	45.76	45.93
PNY	1.19	[redacted]	9.91%	0.04	0.04	0.04	0.03	0.03	0.03	17.2%	0.07	1.47	29.50	29.67
UGI	1.06	[redacted]	9.33%	0.01	0.03	0.03	0.03	0.03	0.03	15.0%	0.07	1.13	28.19	28.34
WGL	1.59	[redacted]	9.93%	0.04	0.04	0.04	0.03	0.03	0.03	17.5%	0.07	1.92	38.26	38.43

Solved with Microsoft Excel's "Goal Seek" function.

Schedule MJR 5: CAPM

Morningstar Reported Returns*		Premium Over Gov bonds		
1/1/80 to 12/30/11		Long Term	Medium Term	Short Term
Large Co Stocks	11.10%	0.90%	2.7%	6%
Small Co Stocks	12.30%	2.10%	3.9%	7.2%
Long Term Gov Bonds	10.20%			
Medium Term Gov Bonds	8.40%			
US Treasury Bills	5.10%			

*2012 Classic Yearbook Table C-1 - C-6

CAPM Long Term Gov Bonds

RF	Beta	MRP	ROE	
10.20% +	0.688 *	1.50% =	11.23%	MRP = average of .9 and 2.1

CAPM Medium Term Gov Bonds

RF	Beta	MRP	ROE	
8.40% +	0.688 *	3.30% =	10.67%	MRP = average of 2.7 and 3.9

CAPM Long Term Gov Bonds

RF	Beta	MRP	ROE	
10.20% +	0.688 *	1.50% =	11.23%	MRP = average of 6 and 7.2

Average ROE = 10.51%

Schedule MJR 6: Beta

		Beta*
American States	AWR	0.7
Aqua American	WTR	0.65
California Water	CWT	0.65
Connecticut Water	CTWS	0.8
Middlesex Water	MSEX	0.7
SJW Corp	SJW	0.85
York Water Co.	YORW	0.7
Artesian Res. Corp.	ARTNA	0.6
AGL Resources, inc.	AGL	0.75
Atmos Energy Corp	ATO	0.7
Laclede Group, inc.	LG	0.6
New jersey Resources Corporation	NJR	0.65
Northwest Natural Gas Co.	NWN	0.6
Piedmont Natural Gas Company	PNY	0.7
UGI CORP	UGI	0.7
WGL Holdings, inc	WGL	0.65
AVERAGE		**0.688**

*Value Line.

Matthew Rowell

PO Box 51628
Phoenix, AZ 85076
480 961 5484 or 602 762 0100
mattrowell@cox.net

Professional History

- **Desert Mountain Analytical Services, PLLC (DMAS)** 2007 – Present
  Managing Member

  DMAS is a small consulting firm specializing in utility finance, ratemaking and other regulatory issues. DMAS' clients range in size from large multinational corporations to small rural utilities.

- **Arizona Corporation Commission** 1996 to 2007

  Chief Economist (July 2001 to February 2007)
  Analyzed and produced testimony or staff reports on a wide variety of utility issues. Supervised a staff of nine professionals with similar responsibilities.

  Economist (October 1996 to July 2001)
  Analyzed and produced testimony or staff reports on a wide variety of utility issues.

- **Arizona State University**, Tempe, AZ 1992-1996.
  Lecturer-economics 1994-1996
  Responsible for teaching economics classes requiring the creation of lectures and tests and assigning grades.
  Teaching assistant 1992-1994
  Responsible for assisting professors in administering tests, grading, and teaching.

Education

- **Master of Science and ABD** Economics, 1995, Arizona State University.
  Successfully completed all course work and exams necessary for a Ph.D. Course work included an emphasis in industrial organization and extensive experience with statistical analysis, public sector economics, and financial economics.
- **Bachelor of Science** Economics, 1992, Florida State University.
  Minors: Philosophy, Statistics.

Certifications

Certified Rate of Return Analyst designation awarded by the Society of Utility and Regulatory Financial Analysts based on experience and successful completion of a written examination.

List of Specific Projects

Global Water

Provided expert testimony regarding Global's financial viability and regulatory status before an arbitration panel. American Arbitration Association Case Nos. 76 198 Y 0104 11JMLE and 76 198 Y 0105 11 JMLE.

Provided strategic advice and analysis to Global re the ACC's ongoing water workshops.

Rate case testimony: Cost of Capital, Rate Consolidation, treatment of Infrastructure Coordination and Finance Agreements, Docket No. W-20446A-09-0080.

Prepared and sponsored testimony on Global's Notice of Intent to Restructure, Docket No. W-20446A-08-0247.

Provided strategic guidance regarding the Arizona Water complaint against Global, Docket No. W-01445A-06-0200.

EPCOR Utilities, Inc.

Provided strategic advice on the Arizona regulatory environment as it relates to EPCOR's purchase of Arizona utilities.

Rio Rico Properties

Testimony in the Rio Rico Utilities rate case, Docket No. WS-02676A-09-0257.

Residential Utility Consumer Office

Testimony re affiliate relations in the Litchfield Park Service Company Rate Case, Docket No. SW-01428A-09-0103.

Other

Assisted with financial analysis, rate design and other rate case testimony and schedules for East Slope, Antelope Run, Indiada, Southland, Valle Verde and other small water companies.

ACC Staff

APS Rate Case E-01345A-05-0816: Provided testimony on staff's position on APS' proposed Environmental Improvement Charge. Also acted as the overall case manager and was responsible for coordinating all of staff's testimony.

APS Application to acquire a power plant in the Yuma area E-01345A-06-0464: Provided testimony detailing Staff's position on the application.

Southern California Edison's application to build a high voltage power line linking Arizona to Southern California L-00000A-06-0295-00130: Provided testimony detailing the potential economic effects of SCE's proposed power line.

Accipiter's complaint against Cox Communications regarding the Vistancia development T-03471A-05-0064: Provided testimony regarding Accipiter's allegations concerning Cox's dealings with the developers of Vistancia.

Managed Staff's case (including negotiating a settlement agreement) in APS' 2003 rate case.

Negotiated (along with other Staff members) the settlement between staff and Qwest regarding three enforcement dockets.

Supervised the "independent monitor" of APS' and Tucson Electric Power's wholesale power procurement.

Provided testimony on Qwest's noncompliance with the Commission's wholesale rate order.

Managed Staff's case regarding Qwest's alleged noncompliance with the Federal Telecommunications Act.

Staff's lead witness in the Commission's reevaluation of the electric competition rules which resulted in the suspension of APS' and TEP's obligation to divest their generation assets.

Supervised the testing of Qwest's operational support systems (OSS) and the development of Qwest's Performance Assurance Plan as part of Qwest's compliance with Section 271 of the Federal Telecommunications Act.

Provided testimony on the geographic de-averaging of Qwest's Unbundled Network Element prices.

Acted as Chairman of the Commission's Water Task Force.

EXHIBIT 6

ADEQ Federal Tax #866004791

Annual Sampling Fee Invoice **Invoice #** 66037

ARIZONA CORPORATION 414 N COURT AVE	Owner Id #: 7610	MAP
	Billing for Calendar Year: 2010	
TUCSON AZ 85701 10095 - Arizona Corporation	Due Date: 12/11/2009	

ANNUAL SAMPLING FEE WORKSHEET

pd 4274.62
on 12.2.09
Ck #8769

Base Fee (all MAP systems)		$ 250.00
Fee per Connection in 2010	1,566 connections X $ 2.57	$ 4,024.62
Total Sampling Fee		$ 4,274.62
Plus Paid Interest Charges and/or Other Adjustments		$ 0.00
Plus Unpaid Interest Charges as of 10/27/2009		$ 0.00
Minus Payments Received and/or Other Adjustments		$ 0.00
Amount Due		$ 4,274.62
Amount received by ADEQ (Make check payable to State of Arizona)		$

* A $12 fee will be charged for any check not honored by the bank.

Make your check or money order payable to State of Arizona
THIS FORM MUST ACCOMPANY YOUR REMITTANCE.

Mail to: Arizona Department of Environmental Quality
PO Box 18228
Phoenix, AZ 85005

Do not write below this line

Check Number:	
Received:	
Postmarked:	
Entered:	CS3 10/27/2009 WM300Go

This entire bottom portion must be returned to ADEQ.

ADEQ Federal Tax #866004791

Annual Sampling Fee Invoice **Invoice #** 67506

RAY WATER CO INC 414 N COURT AVE	Owner Id #: 22151	MAP
	Billing for Calendar Year: 2011	
TUCSON AZ 85701 10095 - Ray Water Co Inc	Due Date: 11/19/2010	

ANNUAL SAMPLING FEE WORKSHEET

pd $4274.62 on 10-18-10 CK# 19343

Base Fee (all MAP systems)		$ 250.00
Fee per Connection in 2011	1,566 connections X $ 2.57	$ 4,024.62
Total Sampling Fee		$ 4,274.62
Plus Paid Interest Charges and/or Other Adjustments		$ 0.00
Plus Unpaid Interest Charges as of 10/05/2010		$ 0.00
Minus Payments Received and/or Other Adjustments		$ 0.00
Amount Due		$ 4,274.62
Amount received by ADEQ (Make check payable to State of Arizona)		$

* A $12 fee will be charged for any check not honored by the bank.

Do not write below this line.

Make your check or money order payable to State of Arizona
THIS FORM MUST ACCOMPANY YOUR REMITTANCE.

Mail to: Arizona Department of Environmental Quality
PO Box 18228
Phoenix, AZ 85005

Check Number:	
Received:	
Postmarked:	
Entered:	CS3 10/05/2010 WM300Go

EXHIBIT 7

Arizona Department of Environmental Quality
Drinking Water Monitoring and Protection Unit
Mail Code 5415B-2
1110 West Washington Street
Phoenix, AZ 85007

Drinking Water Compliance Status Report

System Name	System Type	Is system consecutive?
RAY WATER CO INC	☒ Community	☒ Yes,
System ID #	☐ Non-transient Non-community	to PWS # 10112
10095	☐ Transient Non-community	☐ No

Overall compliance status	☒	No major deficiencies	☐	Major deficiencies
Monitoring and Reporting status	☒	No major deficiencies	☐	Major deficiencies

Comments: None

Operation and Maintenance status	☒ No major deficiencies	☐ Major deficiencies	
Date of last Sanitary Survey	12-17-09	**Inspector**	Mike Redmond, PDEQ

Major unresolved/ongoing operation and maintenance deficiencies:

- ☐ unable to maintain 20psi
- ☐ cross connection/backflow problems
- ☐ treatment deficiencies
- ☐ certified operator
- ☐ inadequate storage
- ☐ surface water treatment rule
- ☐ ATC/AOC
- ☐ other ▪

Comments: During the last sanitary survey, recommendations were made on source (improve electrical equipment at well #6) and distribution system (do routine maintenance on all valves at well #4).

Is an ADEQ administrative order in effect?	☐	Yes	☒	No

Comments: None

System Information	
Population Served	4500
Service Connections	1500
Number of Entry Points to the Distribution System	4
Number of Sources	6
Initial Monitoring Year	1994
Monitoring Assistance Program (MAP) System	☒ Yes ☐ No

Evaluation completed by	Donna Calderon, Manager Drinking Water Monitoring and Protection Unit		
Phone	602-771-4641	**Date**	April 2, 2012

☒	Based upon data submitted by the water system, ADEQ has determined that this system **is** currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4, and **PWS is in compliance.**
☐	Based upon the monitoring and reporting deficiencies noted above, ADEQ **cannot determine** if this system is currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4, and/or **PWS is not in compliance.**
☐	Based upon the operation and maintenance deficiencies noted above, ADEQ **cannot determine** if this system is currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4, and/or **PWS is not in compliance.**

This compliance status report does not guarantee the water quality for this system in the future, and does not reflect the status of any other water system owned by this utility company.

EXHIBIT 8

Certificate of Compliance
Letter of Good Standing

Ray Water Company

This Certificate of Compliance is issued pursuant to Arizona Revised Statutes Section 42-1110 and/or Section 43-1151. It certifies that, according to department records, the above named taxpayer has filed and paid all taxes due under Title 42 and Title 43, specifically and only as to the following described tax types and identification/license numbers:

TAX TYPE	IDENTIFICATION
Federal Employer Identification Number	86-0146061
Transaction Privilege Tax License	10-013037-L
Withholding License	86-014606-1

This certification is made conditionally and is subject to the findings of any subsequent audit.

Issued To:
Ray Water Company
Attn: Rhonda Mallis Rosenbaum
414 North Court Avenue
Tucson, AZ 85701

Christina Canisales
Revenue Auditor II 602-716-6234
May 31, 2012
www.AZDOR.gov